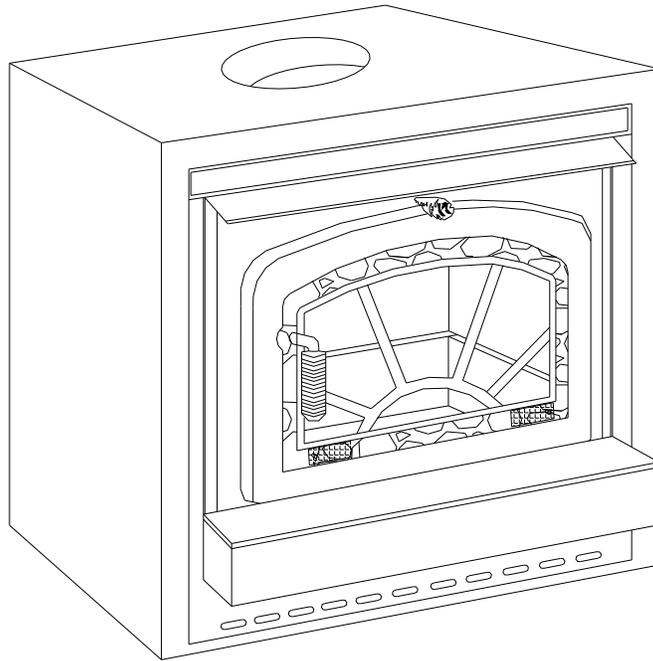


GEMINI-XL

ZERO-CLEARANCE

By Appalachian



INSTALLATION AND OPERATION PROCEDURES

FIREPLACE INSERT - FREESTANDING
MOBILE HOME MODELS

GEMINI PATENT

PAT.#4,607,611

August 26th, 1986

© 1994 Appalachian Stove & Fabricators, Inc.

TABLE OF CONTENTS

I. Stove Features and Operating Controls.....	3
II. Clearances for Installation.....	4
1. Clearances for Fireplace Installation.....	4
2. Clearances for Freestanding Installation.....	4
III. Installation as a Fireplace Unit.....	5
1. Stove Components.....	5
2. Mounting the Optional Trim Panels.....	5
3. Installing the Gemini XL Unit.....	6
4. Importance of Proper Draft.....	6
IV. Freestanding Installation.....	7
1. Stove Components.....	7
2. Preparation.....	7
3. Attaching the Freestanding Kit.....	8
4. Importance of Proper Draft.....	8
5. Mounting the Stove Pipe.....	8
6. Chimney Installation.....	9
V. MOBILE HOME INSTALLATION.....	9
1. General Procedures.....	9
2. Installation of External Air Duct.....	9
VI. Installing the Brass Trim.....	10
1. Standard Brass.....	10
2. Optional Brass.....	10
VII. Catalytic Combusters.....	11
1. General Information.....	11
(A) Tamper Warning.....	11
(B) Manufacturer and Warranty Information.....	11
2. Catalyst Monitoring.....	11
3. Catalyst Troubleshooting General Info.....	12
4. Catalyst Replacement.....	13
VIII. Stove Operation.....	14
1. Fuel Selection.....	14
2. Building and Maintaining a Fire.....	14
3. Refueling the Stove.....	14
4. Achieving Catalyst Light-Off From a Cold Start.....	14
5. Catalyst Light-Off When Refueling.....	14
IX. Maintenance.....	15
1. Ash Removal.....	15
2. Care of the Glass.....	15
3. Chimney Care.....	15
4. Stove Finish.....	15
5. Blower Care.....	15

6. Door Gasket Replacement.....	15
7. Motor Maintenance.....	15
X. Safety.....	16
XI. Limited Warranty.....	16
XII. Warranty Registration.....	17

NOTE: Tested and listed by Arnold Greene Testing Laboratories to test standards ANSI-UL 1482, 737, 127 HUD specifications and Uniform Building Code.

Thank you for purchasing the Gemini XL Zero-Clearance stove unit. Appalachian Stove welcomes you to the growing ranks of energy conscious Americans.

Heating with wood and bituminous coal is one way we can all help to conserve resources, as well as stimulate a healthy economy. The forest industry has worked for many years to assure a continual supply of our most abundant renewable resource - wood.

To fully benefit from your stove and to ensure safe operation, follow the instructions outlined in this manual carefully. We hope you enjoy many years of safe, economical heat from your Gemini XL Zero-Clearance stove.

This manual describes the installation and operation of the Appalachian Stove's Gemini XL catalytic equipped wood heater. This heater meets the United States Environmental Protection Agency's emission limit for wood heaters sold after July 1, 1988. Under specific conditions, this heater has been shown to deliver heat at rates of 10,100 to 26,900 BTU/hour.

I. FEATURES AND OPERATING CONTROLS

Before installing and operating the Gemini XL Zero-Clearance unit, familiarize yourself with its features and operating controls. The Gemini XL is designed for use with zero-clearance to combustibles. A centrally located installation site is preferable, if possible, to ensure equal heat distribution throughout the home. If you plan to install the Gemini XL as a fireplace unit, the site you select for installation and finishing construction will enhance your present decor and heat your home efficiently.

1. Quality steel construction - assures years of dependable service. The firebox is constructed of 4 gauge plated steel.

2. Special Fireproof Insulation - lines the solid steel outer box and covers the firebox to provide high temperature resistance.

3. Warm air outlets - distribute heated air from around the firebox.

4. Front mounted blower - circulates air around the fire chamber for increased heat. The easily mounted blower allows for quick access, if service is needed.

5. One piece glass door - seals the firebox for high efficiency and allows viewing of the fire.

6. Refractory firebox liner - boosts burning efficiency by reflecting radiant heat back into the fire, which results in a more thorough and cleaner burn.

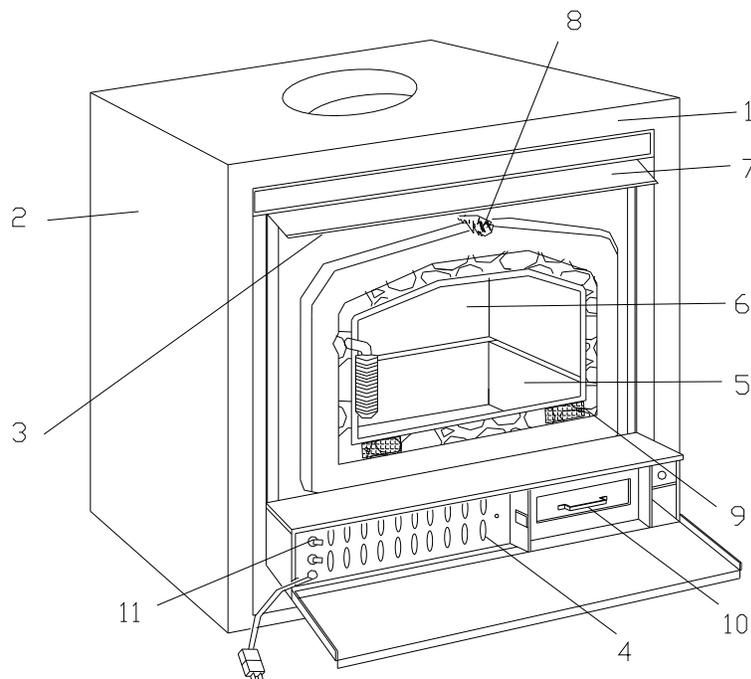
7. Warm air deflector - on the top stove edge directs heated air downward and across the floor for maximum comfort.

8. Sliding damper - helps increase heat extraction by controlling the escape of hot combustion gasses and smoke. The sliding damper is opened by pulling the control handle out and closed by pushing the handle in. The damper may be left in any intermediate position.

9. Draft controls - regulate the burning rate and the heat output of the stove. The larger the fire, the more heat the unit will produce. The drafts are opened by pulling the controls in the door toward the center of the unit (together) and may be left in any intermediate position. Start up air (centered under the door) may only be opened during the building of the fire (5 minute max.).

10. Ash pan - for easy removal of ash.

11. Three speed switch - assists in the adjustment of air circulation around the firebox. The automatic position is thermostatically controlled, the blower comes on when the activation temperature is reached. The manual position allows for blower start up at any time.



II. CLEARANCES FOR INSTALLATION

1. CLEARANCES FOR FIREPLACE INSTALLATION

To ensure a safe installation, the following minimum clearances must be met:

- A) Chimney clearance: 6" or 8" insulated class A pipe (low heat residential type all-fuel) must be used. Follow pipe manufacturer's recommendations.
- B) A minimum of 12" must be maintained from the front edge of the unit to any wall.
- C) A minimum of 12" must be maintained from the top of the unit to any combustible overhanging mantel.
- D) A minimum of 22" floor protection in front of the stove of 3/4" fireproof millboard, or the equivalent, must be used.
- E) Clearances are affected by the composition of the wall structure (combustible or non-combustible materials). Use of non-combustible materials will reduce the clearance needed.

NOTE: Walls of wood frame construction covered with a non-combustible veneer, such as brick, are considered combustible walls.

NOTE: For details on chimney installation, see FIGURE 10.

2. CLEARANCES FOR FREESTANDING INSTALLATION

The Gemini XL is specially designed for zero clearance to combustibles as a freestanding unit (FIGURE 2). Rear and side-wall clearances depend on two factors:

- A) Composition of the wall structure (combustible or non-combustible materials). Use of non-combustible materials will reduce the clearance needed.
- B) Chimney Clearance: 6" or 8" insulated class A pipe (low residential heat type all-fuel) must be used. Follow pipe manufacturer's recommendations.

NOTE: Walls of wood frame construction covered with a non-combustible veneer, such as brick, are considered combustible walls.

If the stove is installed on a combustible floor, a protective pad of 3/4" fireproof millboard, or equivalent, must extend 22" in front of the stove unit only.

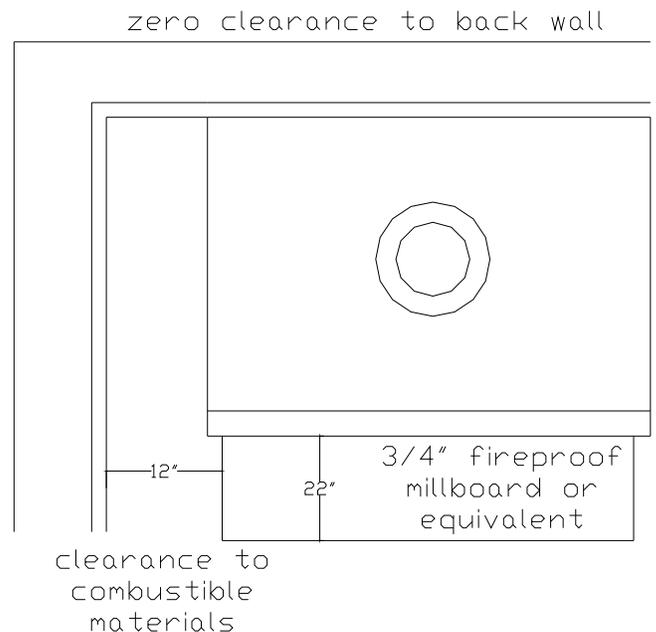


FIGURE 2 - FREESTANDING CLEARANCES
(Top View)

III. INSTALLATION AS A FIREPLACE UNIT

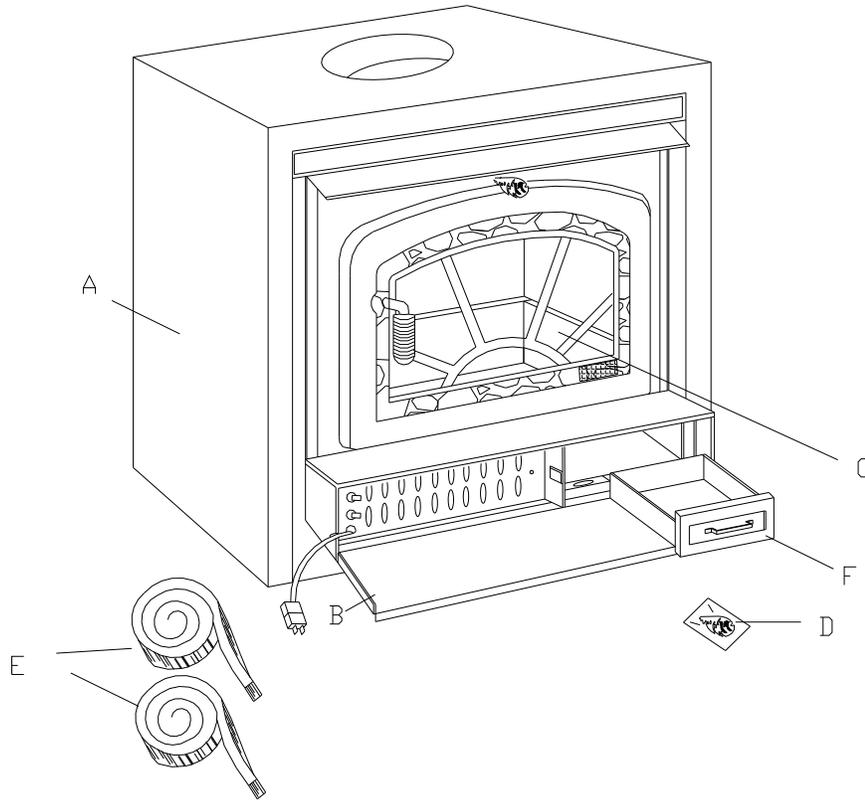


FIGURE 3
FIREPLACE UNIT STOVE COMPONENTS

1. STOVE COMPONENTS

The following components are included with the Gemini XL unit:

- A) Gemini XL Unit
- B) Blower Assembly
- C) Refractory Firebox Liner
- D) Damper Spring
- E) Heat Resistant Insulation Rolls
- F) Ash Pan

2. Mounting Optional Trim Panels

- A) Mount the top trim panel with the mounting screws provided.
- B) Mount side panels.

NOTE: The Gemini XL trim kit may be installed $\frac{1}{2}$ " to a maximum of 2- $\frac{1}{2}$ " from the front edge of the stove. One half inch is preferred.

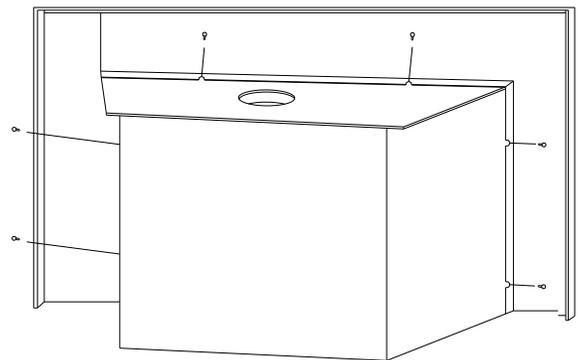


FIGURE 4
TRIM PANELS (OPTIONAL)

3. INSTALLING THE GEMINI XL UNIT (Fireplace Installation)

Special care should be taken in selecting the site for installation of the Gemini XL unit. A centrally located site will provide equal heat distribution. Finishing construction details may be done in wood, brick, paneling, “cut” or “natural” stone masonry to blend with your present decor.

A) After selecting the site, place the Gemini XL unit in the desired position.

B) Attach the chimney to the unit, following the special instructions on page 8 in the freestanding section.

C) Finish construction around the unit (FIGURE 5).

D) Trim the stove unit in desired materials to match your decor (wood, paneling, brick, “cut” or “natural” stone may be used).

E) Install the protective hearth in front of the unit last, after all other construction is complete.

F) Do not block any natural cooling vents of the Gemini XL fireplace unit when installing.

NOTE: If a raised hearth is used, raise the Gemini XL unit in proportion to the elevation to avoid blocking stove vents and to maintain the 22” hearth clearance to combustibles.

This completes the installation of your Gemini XL unit. Please refer to section VIII and IX for instruction on stove operation and maintenance.

4. IMPORTANCE OF PROPER DRAFT

Draft is the force which moves air from the appliance up through the chimney. The amount of draft in your chimney depends on the length of the chimney, local geography, nearby obstructions and other factors. Too much draft may lead to excessive temperatures in the appliance and may damage the catalytic combustors. Inadequate draft may cause backpuffing into the room and “plugging” of the chimney catalyst.

NOTE: Inadequate draft will cause the appliance to leak smoke into the room through the appliance and chimney connector joints.

NOTE: An uncontrollable burn or a glowing red stove part or chimney connector indicates excessive draft.

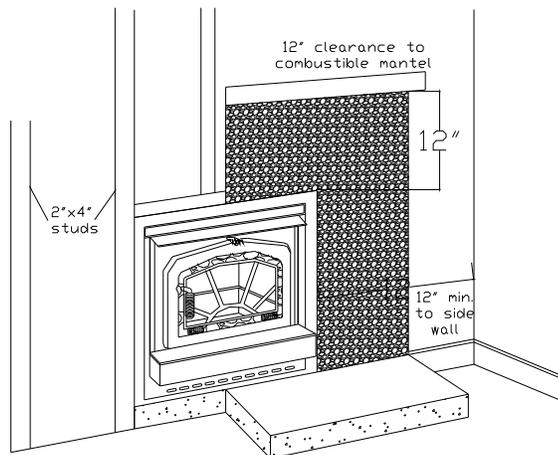


FIGURE 5
FINISHING THE CONSTRUCTION
FOR FIREPLACE INSTALLATION

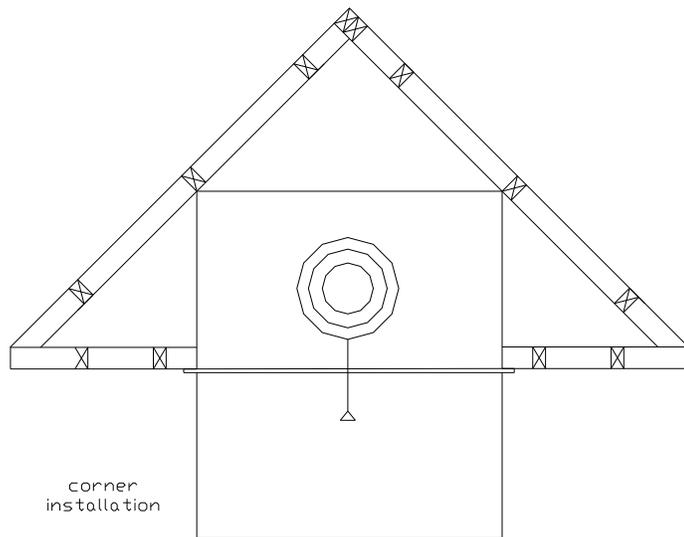
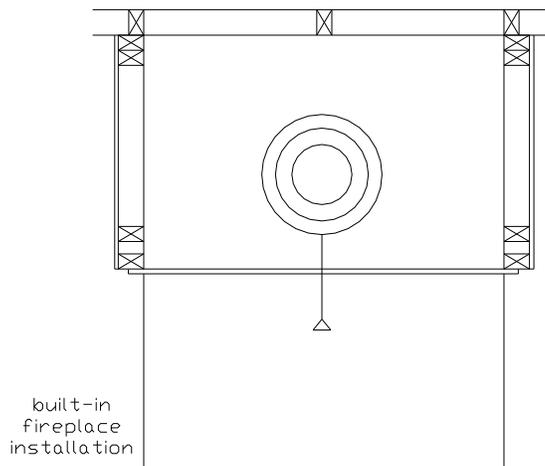


FIGURE 6
INSTALLATION SUGGESTIONS
(Top View)

IV. FREESTANDING INSTALLATION

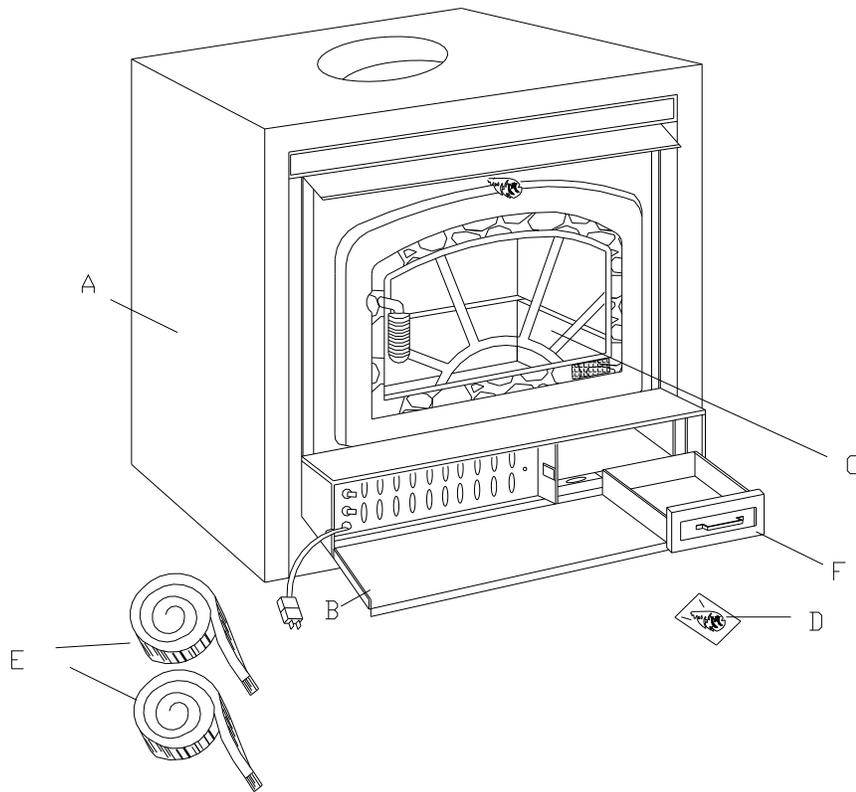


FIGURE 7
FREESTANDING STOVE COMPONENTS

1. STOVE COMPONENTS

The following components are included with the Gemini XL stove freestanding model:

- A) Gemini XL Unit
- B) Blower Assembly
- C) Refractory Firebox Liner
- D) Damper Spring
- E) Heat Resistant Insulation Rolls
- F) Ash Pan
- G) Pedestal (Optional - Not Shown)

2. PREPARATION

Proper preparation and planning of the installation will simplify the process and help achieve effective operation of the unit.

A) Select the location for the stove installation. The stove should be positioned so that the air flows to the rest of the home in the most direct route possible.

B) Locate the approximate penetration point of the chimney structure. Avoid roof areas such as valleys, ridges, dormers and hips.

Place the floor protector in position, if the installation is being made on a combustible floor. (Section II)

If you are using the optional freestanding base, attach it at this time.

Place the stove in position and check clearances. (Section II)

3. ATTACHING THE FREESTANDING KIT

Tool needed: Drill

A) Remove the wooden blocks from the bottom of the stove.

B) Position the pedestal on the bottom of the stove so that it is centered from the sides, sits inside the angle, and is even with the angle at the front of the stove. The “turned in” flanges on the pedestal should be placed against the bottom of the stove. (NOTE: The vent opening on the bottom of the stove should be completely inside the pedestal.)

C) Attach the pedestal using the drill screws provided. Drill into the holes after the pedestal is positioned correctly. The screws will make their own holes in the stove bottom.

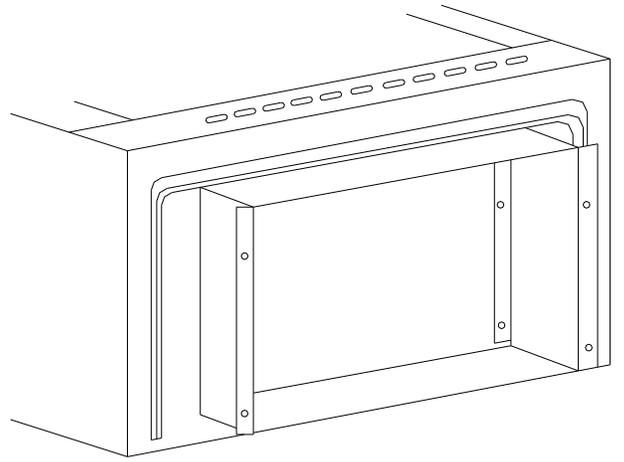


FIGURE 8A

4. IMPORTANCE OF PROPER DRAFT

Draft is the force that moves air from the appliance up through the chimney. The amount of draft in your chimney depends on the length of the chimney, local geography, nearby obstructions, and other factors. Too much draft may lead to excessive temperatures in the appliance and may damage the catalytic combustors. Inadequate draft may cause backpuffing into the room and “plugging” of the chimney catalyst.

NOTE: Inadequate draft will cause the appliance to leak smoke into the room through the appliance and chimney connector joints.

NOTE: An uncontrollable burn or a glowing red stove part or chimney connector indicates excessive draft.

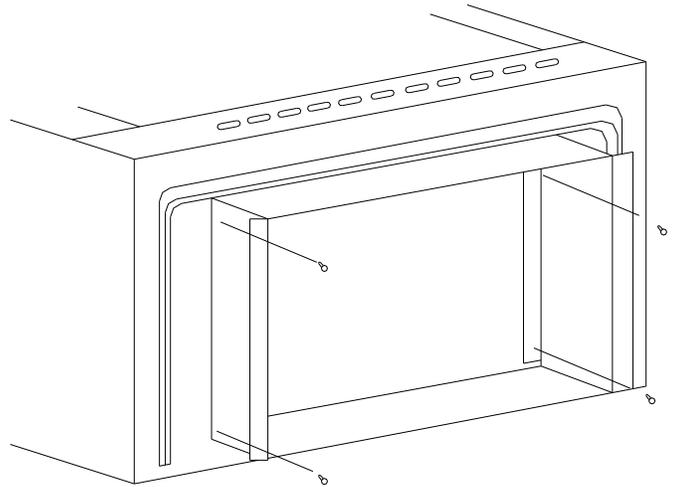


FIGURE 8B

5. MOUNTING THE STOVE PIPE

A) Pipe may be 6” or 8” insulated class A.

B) Slide and secure pipe onto drip-proof connector mounted in the Gemini XL unit.

C) Fill the air space between pipe and Gemini XL unit with heat resistant insulation.

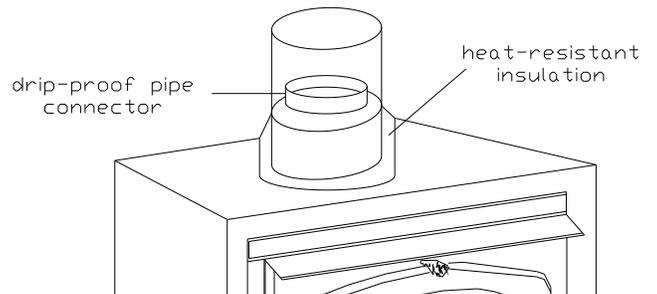


FIGURE 9
MOUNTING THE STOVE PIPE

6. CHIMNEY INSTALLATION

A) Chimney clearance: 6" or 8" insulated class A pipe (low heat residential all fuel) must be used. Follow pipe manufacturer's recommendations.

CAUTION: If you decide to use chimney pipe other than class A pipe, consult your fire marshal for safe installation instructions.

Use one layer of insulation for double wall pipe and two layers for triple wall pipe (FIGURE 9).

B) Attaching chimney to Gemini XL unit (FIGURE 9). A solid fuel chimney must make a positive connection to the drip proof pipe connector at all points along the base of the pipe connector for proper installation.

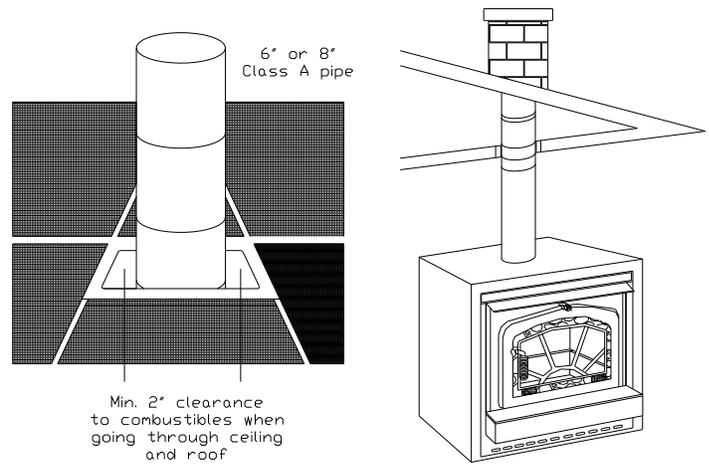


FIGURE 10
CHIMNEY INSTALLATION

V. MOBILE HOME INSTALLATION

1. GENERAL PROCEDURES

Follow the installation instructions for a freestanding stove, with the following changes:

A) The structural integrity of the mobile home floor, wall, and ceiling/roof must be maintained throughout the installation.

B) DO NOT install the model Gemini XL stove in a sleeping room.

C) Be sure to provide means for the secure installation of the stove to the floor of the mobile home.

D) Stove pipe used to connect the stove to the chimney or flue MUST BE double-wall insulated pipe, or equivalent, NOT single wall pipe.

E) A source of external combustion air must be provided using the optional mobile home installation kit.

2. INSTALLATION OF EXTERNAL AIR DUCT

A) Locate the position on the floor protector where the stove will be placed.

B) Mark and cut a 3" diameter hole through the floor protector and flooring materials for installation of the flexible duct.

C) Attach the flexible duct to the air pipe opening, as shown in FIGURE 11, then attach the pedestal to the bottom of the stove, if it is being used.

D) Proceed with normal freestanding installation.

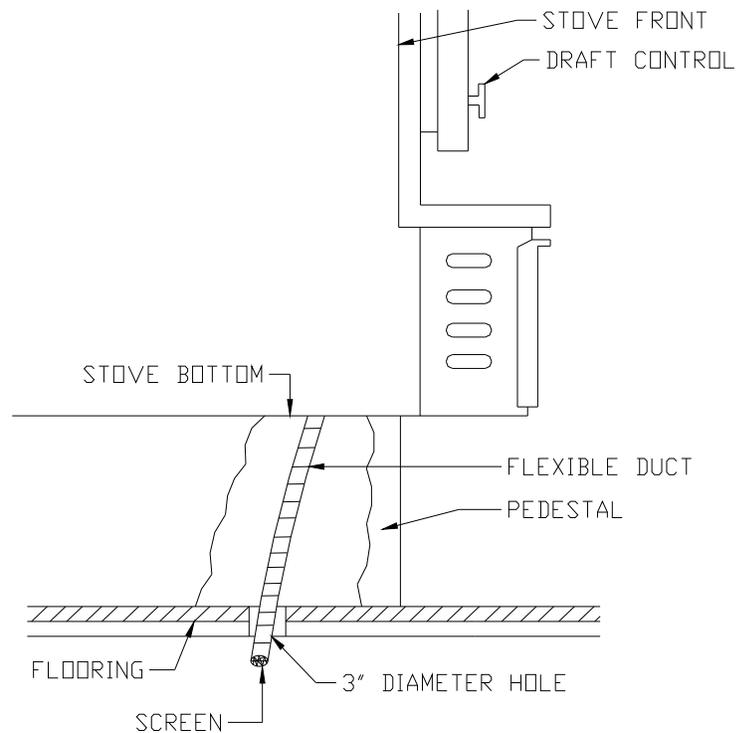


FIGURE 11
INSTALLING EXTERNAL AIR DUCT

VI. INSTALLING THE BRASS TRIM

1. STANDARD BRASS

(A) Spring Damper Handle - screw the handle onto the damper rod counter-clockwise.

(B) Installed for your convenience at the factory is the door handle spring.

2. OPTIONAL BRASS

(A) BRASS TRIM PANELS

This brass is installed around the outside edge of the stove unit. It may be used with both freestanding and fireplace units. If used in combination with the optional trim panels for fireplace units, attach the trim panels first.

1. Mount the top and side strips to the trim panels with the self tapping screws that are provided. Leave approximately 1" at the top edges of the trim to be covered by corner brass. If necessary, strips can be easily cut with a hacksaw.

2. Mount the two brass corners, overlapping the top and the side brass strips.

3. Remove the protective coating from the brass strips before use.

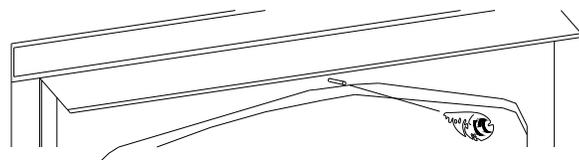


FIGURE 12

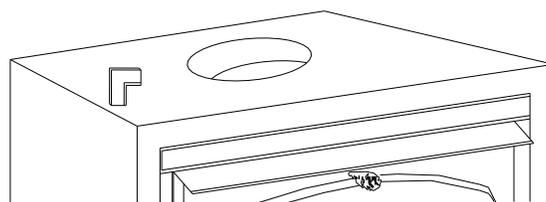


FIGURE 13
FRONT EDGE BRASS

VII. CATALYTIC COMBUSTORS

1. GENERAL INFORMATION

(A) TAMPER WARNING

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 the operating instructions in this manual, or if the catalytic element is deactivated or removed.

(B) MANUFACTURER AND WARRANTY INFO

The combustors supplied with this heater are Applied Ceramics Versagrid Catalytic Converter. Consult the catalytic combustor warranty also supplied with this heater.

Warranty claims should be addressed to:

Applied Ceramics - Warranty Department
P.O. Box 29664
Atlanta, GA 30359
(404) 448-6888

Warranty Claims MUST have the following items:

1. Warranty Claim Form
2. Dated Proof of Purchase
3. Check for proper amount (including postage and handling)
4. APPLIED CERAMICS Catalytic Combustor

2. 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.

Check the following items on a periodic basis:

* Visually inspect combustors at least three times during the heating season to determine if physical degradation has occurred. Actual removal of the combustor is not recommended unless a more detailed inspection is warranted because of a decrease in performance. If any of these conditions exist, refer to the Catalyst Troubleshooting Guide on the following page.

* This catalytic heater may be equipped with a temperature probe to monitor catalyst operation. Proper functioning combustors typically maintain temperatures in excess of 500 degrees F and often reach temperatures in excess of 1000 degrees F. If catalytic temperatures are not in excess of 500 degrees, refer to the Catalyst Troubleshooting Guide or further information located in this manual.

* To determine if the catalyst is working, compare the amount of smoke leaving the chimney when the smoke is going through the combustor and catalyst light-off has been achieved to the amount of smoke leaving the chimney when the smoke is not routed through the combustor (bypass mode - damper open).

1. Light the stove in accordance with the instructions given on how to achieve catalyst light off.
2. With the smoke routed through the catalyst, go outside and observe the emissions from the chimney.
3. Engage the bypass mechanism (open the damper) and again observe the emissions leaving the chimney.

Significantly more smoke should be seen when the exhaust is not routed through the combustor (bypass mode - damper open). Be careful not to confuse smoke with steam from wet wood.

The Gemini XL was designed to allow the owner to monitor the catalyst temperatures. A small port is located on the top of the stove, inside the unit. From that port, wires may be led out of the unit to a temperature monitoring device. Some Gemini models have this wiring already completed. The port is positioned to allow for temperatures to be taken approximately 1" behind the right catalyst. The thermocouple and monitor should be compatible and should read temperatures to approximately 1800 degrees F.

Front Mounted Catalytic Probe

Locate the screw above the door and to the left of the damper. Remove the screw and insert a catalytic probe.

3. CATALYST TROUBLESHOOTING

Operation of any wood stove can create problems. While the use of a catalyst equipped wood stove will substantially lessen some of these problems, such as creosote formation, other traditional wood stove problems may remain.

These problems are invariably related to such conditions as draft, aging or failure of stove components, flue installation, wood supply and others. Here are a few clues that may be of some assistance in discerning these problems:

A sluggish stove performance may be attributed to: a poor chimney draft; an obstruction in the chimney; the chimney damper being closed; closing the bypass damper too soon; burning wet or unseasoned wood; the combustor being plugged or obstructed; or a combination of the above.

A drop in overall fuel efficiency may be attributed to: having cold, windy weather, burning wet, pithy, or spongy wood; the combustor not in operational mode (600 plus degrees); or the combustor being broken or dislodged.

A high fuel consumption may be attributed to: burning the wrong type of wood for the desired heat output; improper regulation of draft or inlet air (close damper after proper light off, install barometric damper set to .06 inches of water, or close inlet air as much as possible); cold, windy weather; or the combustor not engaged or functioning properly.

Backpuffing may be attributed to: gusts of wind; a hot combustor (above 1400 degrees F); or opening doors in a tightly constructed house.

Smoke rollout when the door is opened may be attributed to: the manual flue being closed; wind gusts blowing down the chimney; the combustor is not at operational temperature; or the stove door is being opened too quickly.

Glowing stove parts may be attributed to: running the stove too hot (excessive amounts of wood); a high draft (reduce when temperatures become too excessive); a glowing combustor (which is normal during first 1/3 of burn cycle); or a chimney fire (close inlet air and outlet dampers completely - if this does not help, vacate home and call the fire department immediately).

Creosote accumulation may be caused by one or more of the following: a poorly insulated chimney; a non-functioning combustor; types and amounts of wood burned; or a leaking damper plate.

Creosote leakage from metal flue joints may be caused by one or more of the following: no chimney cap; metal flue assembled improperly; or a normal increase in the moisture due to a higher efficiency of catalytic burning (condensation on cool chimney walls).

A heavy concentration of smoke leaving a chimney may be attributed to one or more of the following: improper wood being burned; the damper is open; or water vapor (on cold, still days, water vapor is often mistaken for smoke, the difference being that water vapor appears to be white and tends to rise vertically and dissipate rapidly while smoke is usually bluish brown and will drift down and settle down in low areas before dissipating).

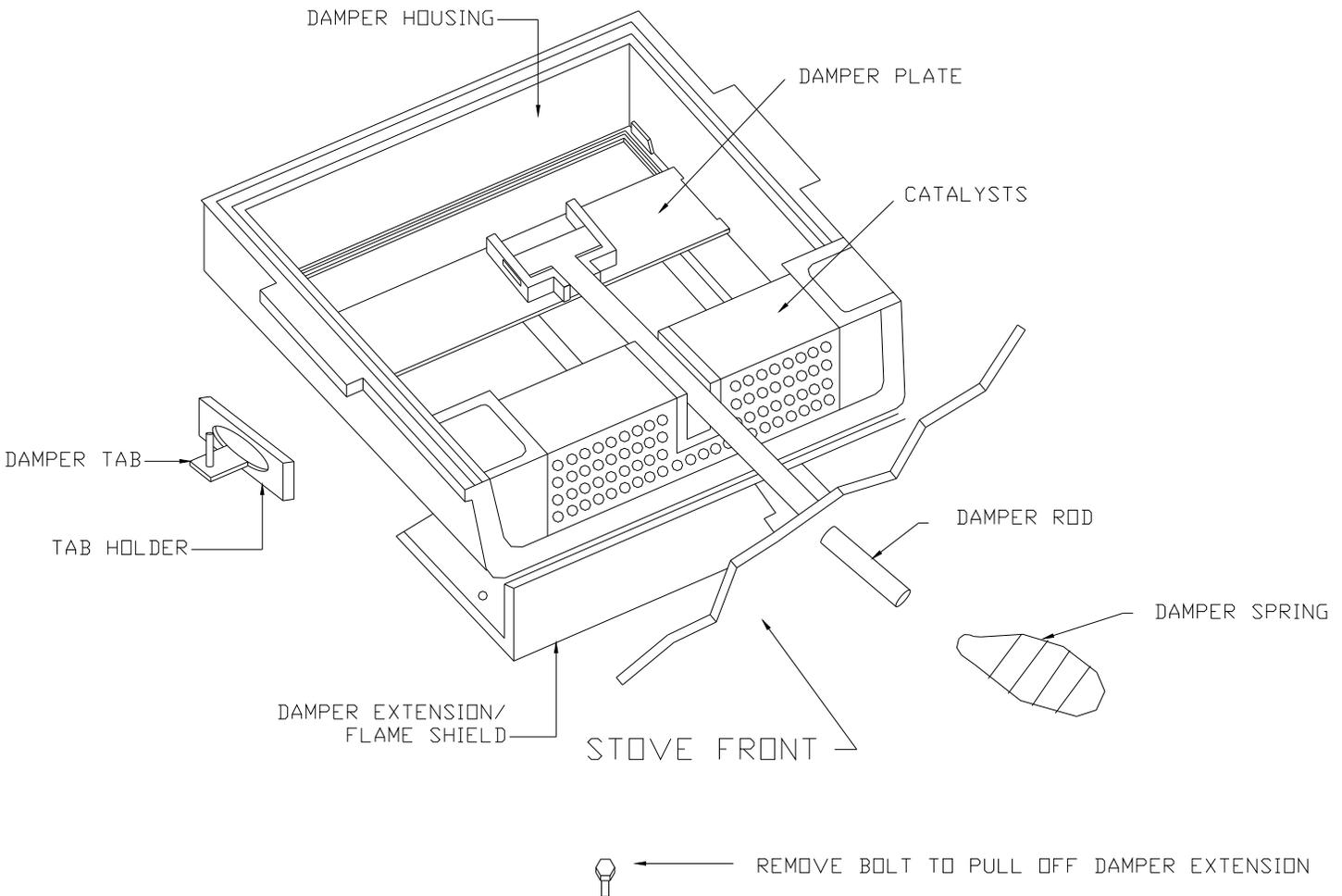
A poor draft may be attributed to these factors: an improper chimney height; wrong size flue being used; cooler temperatures caused by external chimney; or a massive stone or masonry chimney.

An unhealthy combustor can be attributed to plugging, catalyst peeling, catalyst deactivation, masking, substrate cracking (thermal and mechanical), substrate crumbling, color variations (does not affect performance), or catalyst abrasion. An excellent guide to pinpointing and correcting these problems can be found either by consulting your catalyst warranty.

4. CATALYST REPLACEMENT

To replace damaged or non-functioning catalytics follow these steps:

- A) Loosen the damper tab bolts with 9/16" socket to allow the damper tab to slide back and lower the cast housing as shown.
- B) Remove the mixing plate, sealing plate and catalyst. Clean the area where the catalyst sits to remove old gasketing. Inside the stove, check the area where the damper was located and clean away old gasketing, if necessary.
- C) Install the new catalytics. Uncanned catalytics (catalyst not in metal housing) should be wrapped with 1/16" gasketing before installing. Locate the catalytics 1/2" from the front of the damper housing. Reinstall the sealing.
- D) New gasketing should be installed to allow for a seal between the damper housing and the firebox top. This may be done by putting a layer of gasketing around the top where the housing will be located. In both cases the use of an adhesive to hold the gasketing in place will make the installation easier.
- E) Remount the cast housing in the back of the stove. Tighten damper tab bolts. Make sure the damper slides easily. Use furnace cement to seal gaps between the sealing plate and catalytics, rod guide and the top of the firebox.



VIII. OPERATION

Proper operation of your Gemini XL Zero-Clearance unit will help to ensure safe, efficient heating. Please take a few moments to review these simple operating instructions.

1. FUEL SELECTION

The Gemini XL is designed to burn natural wood only. Higher efficiencies and lower emissions generally result when burning air dried seasoned hardwoods, as compared to softwoods or to green or freshly cut hardwoods. **DO NOT BURN THE FOLLOWING:** treated wood, coal, garbage, solvents, colored papers, or trash. Burning these may result in the release of toxic fumes and may poison or render the catalytic 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 the room, rendering the combustor ineffective.

2. BUILDING AND MAINTAINING A FIRE

A) Open the damper fully by pulling the damper control panel all the way out.

B) Place a base of crumpled uncolored newspaper in the bottom of the stove. Lay pieces of kindling on top of the newspaper and light it.

C) As the kindling begins to burn, add several larger pieces of wood until the fire is burning well. At this point, regular size logs may be added.

NOTE: Until the fire is burning well, leave the draft controls in the door fully open.

NEVER USE GASOLINE, GASOLINE TYPE LANTERN FUEL, KEROSENE, CHARCOAL, LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS HEATER. KEEP ALL SUCH LIQUIDS AWAY FROM THIS HEATER WHILE IN USE.

D) For a stove equipped with a catalytic combustor, the damper must be fully closed after the fire is burning well.

E) Regulate the heat output of the stove by adjusting the draft controls to allow a larger fire and vice versa. A short period of experimentation with the control settings will allow you to regulate the heat output to keep your home comfortable.

For the best results in maintaining and achieving fewer emissions in your certified stove, we have found the following instructions to be helpful in operating your Gemini XL:

*For a high or maximum burn, fully open the door draft slides while operating the blower on medium speed.

*For a medium high burn, open both slides approximately 3/8 of an inch and operate the blower on low speed.

*For a medium low burn, open both slides approximately 3/16 of an inch and operate the blower on the low speed. The start-up slide located on the ash pan may be opened during the first three minutes of the burn.

*For a low burn, open the left slide approximately 3/16 of an inch and operate the blower on low speed. The start up air slide may be opened during the first three minutes of the burn.

CAUTION: DO NOT UNPLUG YOUR BLOWER WHILE THE STOVE IS IN OPERATION.

CAUTION: THE ASH PAN DRAWER MUST BE CLOSED WHEN THE STOVE IS IN OPERATION.

3. REFUELING THE STOVE

A) Before attempting to add fuel to the stove, OPEN the damper control fully by pulling it all the way out. This allows the chimney to carry away the additional smoke that occurs when the door is open.

B) **DO NOT OVERLOAD THE STOVE.** Normally, three or four logs will provide heat for several hours. Never operate this stove where portions glow red hot.

4. ACHIEVING CATALYST LIGHT OFF FROM A COLD START

The temperature in the stove and the gasses entering the combustor must be raised to between 500 and 700 degrees F. for catalytic activity to be initiated. During the startup 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 the proper operating temperatures. Even though it is possible to have gas temperatures reach 600 degrees F. within two to three minutes after the fire is started, if the fire is allowed to die down immediately, it may go out, or the combustor may stop working. Once the combustor starts working, heat generated by burning smoke will keep it working.

5. ACHIEVING CATALYST LIGHT OFF WHEN REFUELING

During the refueling and rekindling of a "charcoal phase" fire, operate the stove at a medium or high firing rate for about 10 minutes to ensure that the catalyst reaches approximately 600 degrees F.

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 emissions.

IX. MAINTENANCE

There are several areas of the stove and chimney system that will need periodic maintenance to ensure safe and efficient operation.

1. ASH REMOVAL

When ashes get 3 to 4 inches deep in your firebox, wait until the stove has cooled, then remove the grate at the bottom of the heater into the ash pan below. Carefully remove the pan. 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: For the most efficient stove operation leave a minimum of 2" ash in the firebox at all times. This will help maintain a hot charcoal bed.

NOTE: DO NOT OVERFIRE THIS HEATER.

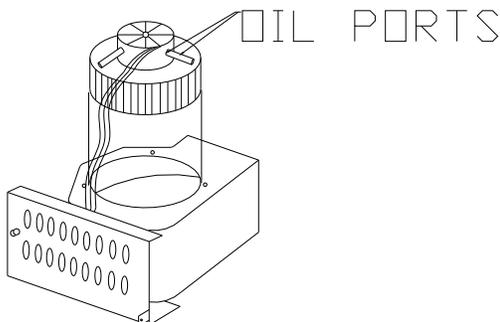
Attempts to achieve heat output rates that exceed heater design specifications can result in permanent damage to the heater and to the catalytic combustor.

2. CARE OF THE GLASS

The glass supplied with your stove is designed to withstand extremely high temperatures. However, like any glass product, IT CAN BE BROKEN! Take care not to bump it with a log or a poker, and be sure the wood is entirely inside the stove before attempting to close the door.

Periodically opening the drafts and allowing the fire to burn brightly will help reduce the soot buildup on the glass. The glass may be cleaned with a NON-ABRASIVE cleaner such as a spray glass cleaner or oven cleaner.

One of the simplest and most effective ways of cleaning the glass is to dip a dampened rag in the ashes and scrub the surface clean. The application of a non-stick cooking spray to the inner surface of the glass will help keep it clean.



3. CHIMNEY CARE

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow burning fire. As a result, creosote residue accumulates on the flue lining. The chimney connector and chimney should be inspected at least twice yearly during the heating season to determine if a creosote buildup has occurred.

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

NOTE: Insert model stoves should be removed from the fireplace for cleaning. Slide the stove out and place it on a piece of cardboard or drop cloths to protect the floor. The fireplace and throat of the chimney CANNOT be properly cleaned with the stove in place.

4. STOVE FINISH

All the stoves are finished with a specially formulated high temperature paint. During the first few firings of the stove, a slight odor of paint may be noticed. This is normal during the curing process and the fumes are not hazardous. If they should cause irritation, simply crack a window or door for a few minutes to disperse the fumes.

NOTE: Although non-toxic, the fumes MAY set off a smoke detector located near the stove.

5. BLOWER CARE

The blower should be removed and cleaned every four months. Unplug the blower before removing or servicing.

TO OIL THE BLOWER:

The blower should be oiled at least two times per season with SAE-20. The oil ports (2) are located on the opposite ends of the center hub on the top side of the blower (see illustration).

6. DOOR GASKET REPLACEMENT

Remove all old gasket and clean the gasket channel, if necessary. Put high temperature silicone adhesive in the channel and lay the gasket in so that the ends of the gasket meet in the bottom right corner of the door back. Press down slightly.

7. MOTOR MAINTENANCE

Use turbine oil when lubricating motor. Perform this task every six months.

X. SAFETY

1. If you plan to use an existing chimney with your stove, inspect it thoroughly to be sure it is sound and clean. Advise your insurance company to be sure your policy covers the use of a wood stove.
2. Be sure that firewood, furniture or other combustible materials are stored a safe distance from the stove.
3. Use smoke detectors near the stove as well as other areas of the home.
4. NEVER USE FLAMMABLE LIQUIDS TO START OR "FRESHEN UP" THE FIRE.
5. Periodically inspect the chimney for deterioration and creosote buildup. Clean it regularly to reduce the chances of a chimney fire.
6. Keep a fire extinguisher rated for class A fires near the stove. The dry chemical type of extinguisher is recommended, as liquid types can cause problems if sprayed onto a hot stove. **BE SURE EVERY MEMBER OF THE FAMILY KNOWS WHERE THE EXTINGUISHER IS AND HOW TO USE IT!**
7. Use of a chimney cap with an approved spark arrestor is recommended.
8. Use caution when loading or working around the stove to prevent burns.
9. Make sure the ash pan drawer is closed when the stove is in operation.

WARNING: THE INSTALLATION OF THIS STOVE MUST COMPLY WITH STATE AND LOCAL REQUIREMENTS AND BE INSPECTED BY THE STATE OR LOCAL INSPECTOR, IF REQUIRED.



APPALACHIAN STOVE & FABRICATORS, INC.
329 EMMA ROAD
ASHEVILLE, NC 28806

Phone: (828) 253-0164

XI. LIMITED WARRANTY

The Appalachian Stove is warranted to be free of defects in materials and workmanship for a period of five years from the date of purchase when used in accordance with the recommendations of the manufacturer, with the following exceptions: electrical, limited to the warranties offered by those respective manufacturers (1 yr.); glass, refractory, firebrick, andirons and decorative trim have no warranty.

Defective parts will be repaired or replaced at the manufacturer's option. Parts which are returned to Appalachian Stove and Fabricators, Inc. within 30 days of purchase and found to be defective on inspection will be replaced without charge for the new part. After 30 days, parts covered by the warranty will be repaired or replaced free with the exception of freight charges which become the responsibility of the purchaser. All replacement parts are shipped F.O.B. factory (freight collect). This warranty does not cover damage caused by alteration, repairs, abuse, tampering, or improper operation of this unit. It does not cover damage from handling or acts of God.

This warranty is in lieu of all other warranties expressed, implied or statutory, and the manufacturer expressly excludes any implied warranty of fitness for a particular purpose or an implied warranty of merchantability, and all other obligations or liabilities of the manufacturer who neither assumes nor authorizes any person to assume for it any other obligations or liability in connection with its products. In addition, the manufacturer shall be held free and harmless from liability from damage to property or injury to persons related to the operation, proper or improper use of the equipment. This warranty applies only to the original purchaser. **THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.**

All claims made by the purchaser under this warranty should be directed through the dealer from whom the unit was purchased. If the dealer cannot be contacted after reasonable effort, claims may be placed with Appalachian Stove and Fabricators, Inc.

Stove Model: _____

Serial #: _____

Fax: (828) 254-7803

STANDARD APPALACHIAN MOTOR REPLACEMENT

VERY IMPORTANT:
UNPLUG
BLOWER

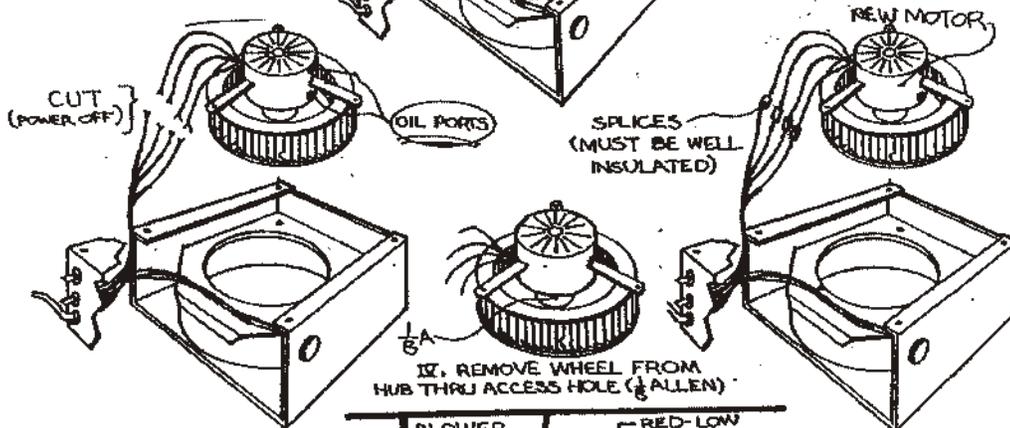
I. REMOVE BLOWER BY PULLING IT OUT OF THE MOTOR HOUSING. REMOVE THE 4 PH'S AS SHOWN AND REMOVE SWITCH PLATE.

II. REMOVE THE THREE MAIN BOLTS; THEN REMOVE HUB & WHEEL BY PULLING UP.

III. DISCONNECT WIRING EITHER BY CUTTING MOTOR WIRES (AS ILLUSTRATED) OR REMOVING THEM FROM DIRECTLY BEHIND THE SWITCHES. (THIS WOULD REQUIRE THE USE OF A SOLDERING GUN)

V. CONNECT WHEEL TO NEW MOTOR HUB

VI. RECONNECT WIRES TO NEW MOTOR. (COLORS WILL MATCH) YOU MAY NEED TO REFER TO WIRE DIA. BELOW.

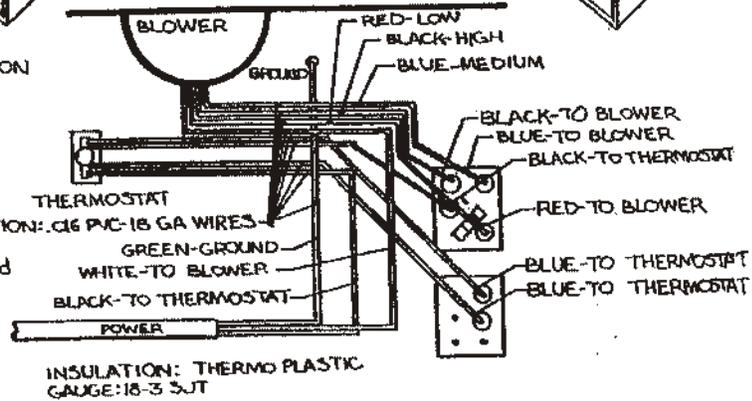


IX. REMOVE WHEEL FROM HUB THRU ACCESS HOLE (1/8 ALLEN)

WIRE CONFIGURATION
(IN CASE EXTENSIVE WIRING IS NEEDED)

MAX OUTPUT: 300 CFM

LUBRICATION:
The motor bearings should be relubricated every 6 months with 10 or 20 drops of SAE 10W or 20W non-detergent oil (ML Type) or with electric motor oil.



XII. WARRANTY REGISTRATION

NAME: _____

ADDRESS: _____

_____ ZIP _____

STOVE MODEL: _____

SERIAL NUMBER: _____

DATE OF PURCHASE: _____

DEALER NAME: _____

CITY: _____ STATE: _____

HOW DID YOU HEAR ABOUT APPALACHIAN STOVE? _____

TYPE OF HEAT YOU PRESENTLY HAVE? _____

APPROXIMATE SQUARE FEET OF HOME: _____

NUMBER OF ROOMS: _____

TYPE OF CONSTRUCTION:

___ BRICK ___ LOG ___ FRAME ___ MASONRY

HOW DO YOU PLAN ON USING YOUR STOVE?

___ PRIMARY HEAT ___ SUPPLEMENTAL HEAT

ARE THERE OTHER FEATURES OR ACCESSORIES YOU WOULD LIKE TO SEE OFFERED? _____