

# STANDARD APPALACHIAN MOTOR REPLACEMENT

VERY IMPORTANT:  
UNPLUG  
BLOWER

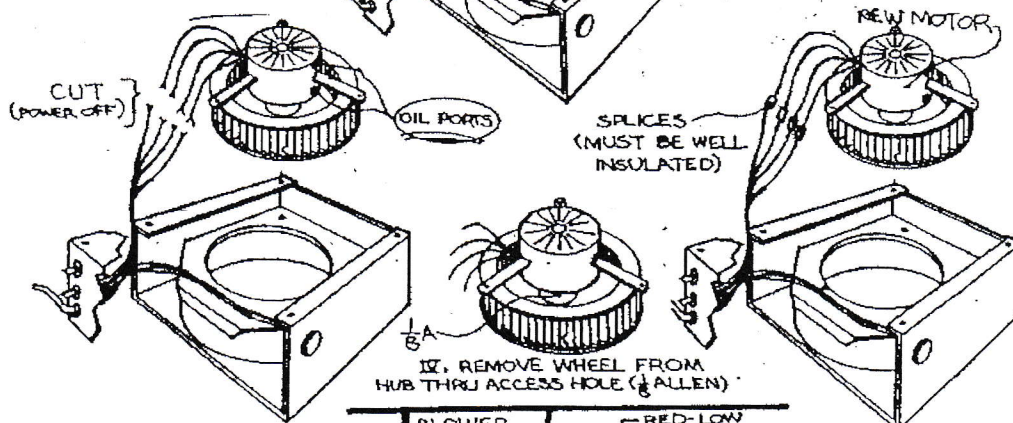
I. REMOVE BLOWER BY PULLING IT OUT OF THE MOTOR HOUSING. REMOVE THE 4 PH'S AS SHOWN AND REMOVE SWITCH PLATE.

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.

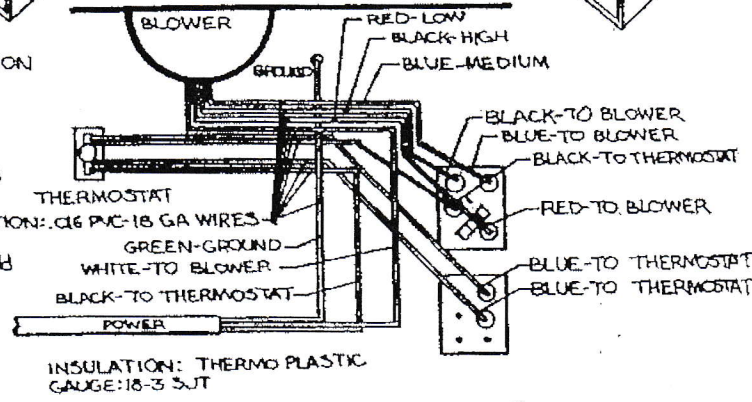


IX. REMOVE WHEEL FROM HUB THRU ACCESS HOLE (1/8" ALLEN)

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.



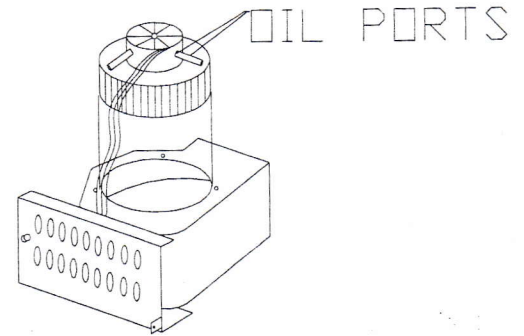
INSULATION: THERMO PLASTIC GAUGE: 18-3 SJT

## 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.



# IX. SAFETY

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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.**

## VII. OPERATION

Proper operation of your 32-BW stove will help ensure safe, efficient heating. Review these instructions.

### 1. FUEL SELECTION

The 32-BW 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 manual control fully by pulling it out; the draft control is located between the blower and ash pan above the hearth.  
B) There are two start up slides located below the main door. Open the slides as far as possible to open the start up draft completely. This feature is to be used only when your unit is starting sluggishly and only during the first 5 minutes of start up and reloading. Close slides during normal operation.

C) 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.

D) 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.**

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

F) 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.

**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.**

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 the 32-BW:

\*For a high or maximum burn, fully open the manual draft control completely.

\*For a medium high burn, open the manual draft control approximately 3/4 of an inch and operate the blower on low speed. \*For a medium low burn, open the manual draft control approximately 1/4 of an inch and operate the blower on the low speed.

\*For a low burn, completely close the manual draft control and operate the blower on low speed. The blower is to be operated on the low speed.

### 3. OPERATING THE BLOWER

The blower may be operated on the automatic or manual setting. On the manual setting the blower will operate until turned off. (The blower cannot be turned off if the stove is hot.) On the automatic setting the blower will come on automatically when the stove is hot and will shut off when the stove cools down.

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

### 4. 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.

### 5. 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.

### 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 invariable 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.

## V. INSTALLING THE BRASS TRIM

### 1. STANDARD BRASS

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

(B) Draft Knob - screw directly into the hole in the draft slide rod.

(C) Brass Door Trim - factory installed.

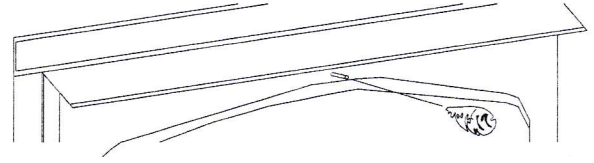


FIGURE 10

### 2. OPTIONAL BRASS (BRASS FOR TRIM PANELS)

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.

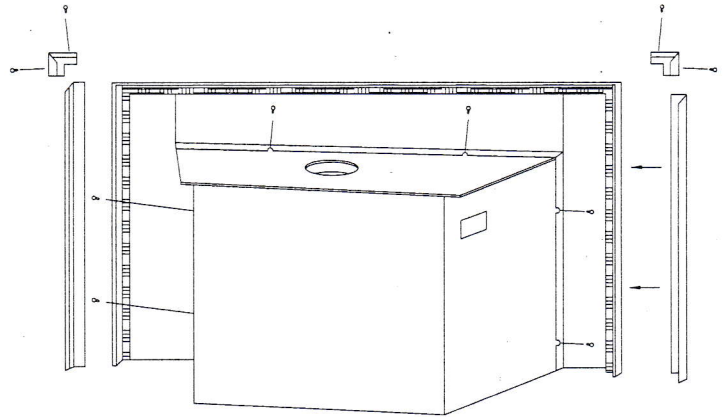


FIGURE 11

### 3. MOUNTING THE FREESTANDING KIT

Tool needed: Drill

A) Remove the wooden blocks from the bottom of the stove. A drill may be used to remove the screws.

B) Position the pedestal on the bottom of the stove so that the "turned in" flanges are against the bottom of the stove. The front flange corners should be aligned with the widest stove corners.

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.

### 4. CHIMNEY INSTALLATION (GENERAL)

A) The single wall stove pipe used to connect the stove to the flue, whether masonry or factory-built, must be a minimum of 24-gauge blue or black steel no less than 8" in diameter.

B) Secure every pipe joint with three or more sheet metal screws to prevent accidental separation.

C) If an elbow is installed, the horizontal section of the stove pipe should slope 1/4" per foot, or run toward the stove to allow creosote to drip into the firebox.

D) Always install the single wall stove pipe with the male (crimped) end down to prevent leakage of creosote or moisture.

### 5. INSTALLATION INTO MASONRY FLUE

Masonry flue for use with solid fuel appliances must meet the NATIONAL FIRE PROTECTION ASSOCIATION'S CODE 211 specifications.

Connection to the masonry flue is made with a masonry or terra-cotta type thimble cemented firmly in place.

Material around the thimble connection must provide adequate protection from fire. Use either 24" of solid masonry or an approved insulated connector.

Stove pipe should be inserted far enough into the thimble to assure a good connection, but must not extend past the flue lining.

Do not use more than one elbow in the stove pipe.

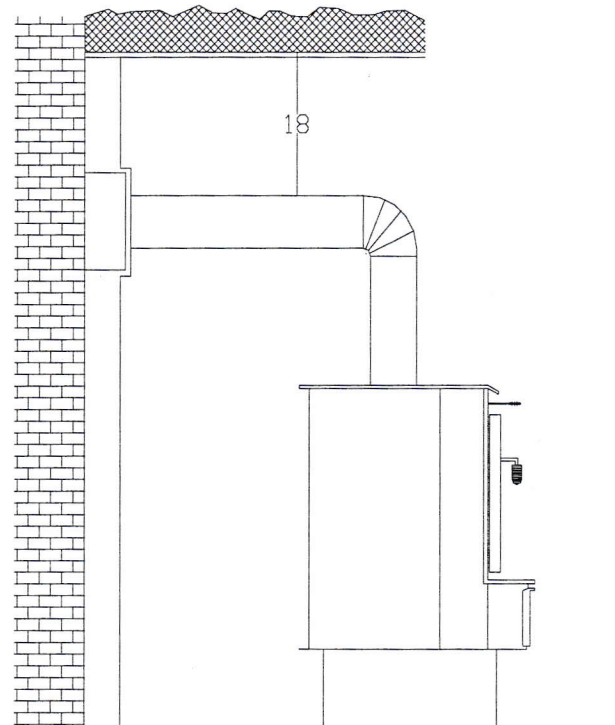


FIGURE 8  
INSTALLATION INTO MASONRY FLUE

### 3. MOUNTING THE TRIM PANELS

A) Determine the depth needed for the stove to sit in fireplace.

B) Before placing the stove into the fireplace, place the top trim panel squarely on top of the stove, (square with the unit and fireplace opening).

C) Attach the top of the trim panel to the top of the stove using the top trim panel brackets and the self-tapping metal screws.

D) Slide the side trim panels onto the top trim panel. Use the self-tapping metal screws to secure the side panels. If desired, the top trim panel brackets can be removed for easy access to the top trim panel for inspection of the stove and chimney.

E) Use the foil backed insulation on the back side of the trim panels. Add silicone, if desired, to increase the seal around the stove.

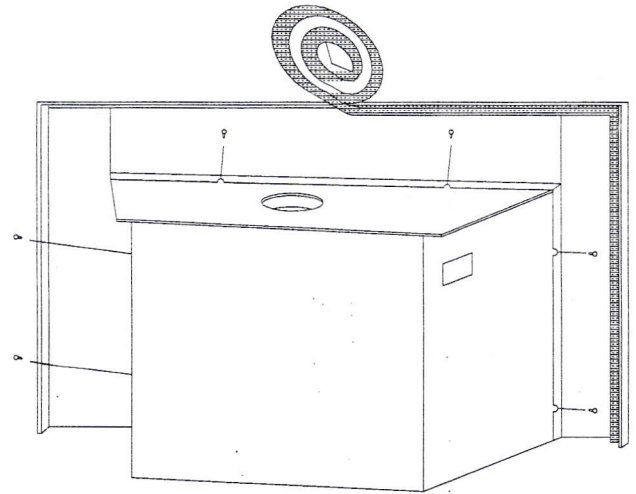


FIGURE 6  
TRIM PANELS

### 4. INSTALLING THE STOVE

A) Slide the stove into the fireplace, centering it within the opening.

B) Push the stove back until the trim panels seal firmly against the face of the fireplace, compressing the insulation to accomplish a seal.

### 5. 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.

NOTE: Be sure the damper opening of the stove lies behind the lintel to prevent overheating the fireplace facing.

NOTE: If the floor of the fireplace is recessed, it must be built up with non-combustible materials, such as brick, scrap metal, etc. The 32-BW should sit level in the fireplace to function properly.

## II. CLEARANCES FOR INSTALLATION

### 1. INSTALLATION AS A MASONRY FIREPLACE INSERT

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

A) Minimum of 16" from stove to the bottom of a combustible material.

B) Minimum of 9" from the edge of the trim panels to any combustibles.

C) Minimum of 12" from side wall of the stove to any combustibles.

D) Minimum of 12" of floor protection in front of the stove, of 3/8" fireproof millboard, or equivalent, for masonry fireplace.

(E) Minimum of 12" floor protection in front of the stove of 3/8" fireproof millboard, or equivalent, for factory built fireplace.

(F) Clearance to combustibles with Appalachian trim panel. To be installed without the pedestal into a masonry fireplace built in accordance with the uniform building code on a masonry hearth extending 12" from the front opening of the fireplace.

### 2. INSTALLATION AS A FREESTANDING UNIT

The Model 32-BW stove must be installed with adequate clearance from combustible surfaces to assure safe operation. (FIGURE 2)

A) Composition of the wall structure (combustible or non-combustible materials).

B) Type of stove pipe used to connect the stove to the chimney or flue (single wall to double wall, insulated pipe).

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

1. If the stove is installed on a combustible floor, a protective pad of 3/8" fireproof millboard, or equivalent, must be placed beneath the pedestal. It must extend 8" from either side and rear of the stove, and 16" in front.

2. If the stove pipe is installed with an elbow to penetrate the wall into a flue, the minimum clearance of the elbow is 18" from the top of the stove pipe and the ceiling.

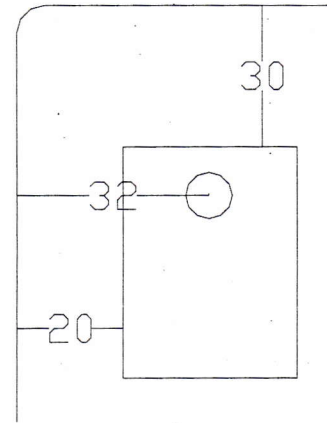


FIGURE 2 - FREESTANDING CLEARANCES  
(Top View)

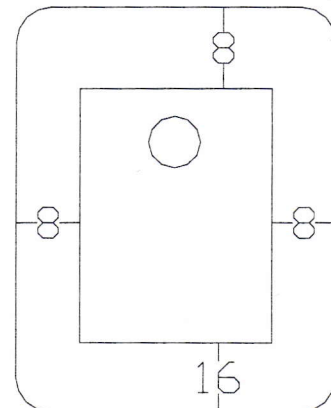


FIGURE 3 - CLEARANCE TO COMBUSTIBLES  
(Top View)



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Thank you for purchasing the Model 32-BW stove. 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 Model 32-BW stove.

This manual describes the installation and operation of the Appalachian Stove's 32-BW 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 10,405 to 24,447 BTU/hour.