

owners manual
Forester Fireplace Insert

Model 4500 Catalytic

FOR INSTALLATION IN MASONRY FIREPLACES

Save This Manual
For Future Reference

CAUTION:
Read All Instructions
Carefully Before Starting
The Installation or
Operating The Heater.

Improper Installation Could
Void Your Warranty!



- Assembly
- Installation
- Operation
- Repair Parts

DO NOT USE THIS HEATER
IN A MOBILE HOME OR TRAILER



UNITED STATES STOVE COMPANY
P.O. Box 5349, Chattanooga, TN 37406

FORM 65800

CONGRATULATIONS!

You've purchased one of America's Finest Wood Burning Heaters. By heating with wood you're helping CONSERVE AMERICA'S ENERGY! Wood is our Renewable Energy Resource. Please do your part to preserve our wood supply. Plant at least one tree each year. Future generations will thank you.

rules for safe installation and operation

Read these rules and instructions carefully.

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

1. Check your local building and fire codes. This installation must comply with their rulings.
 2. Install the Fireplace Insert in a masonry fireplace only with a masonry chimney that is constructed in accordance to NFPA 211. **DO NOT** install the Fireplace Insert in a factory-built metal fireplace (Zero Clearance). **DO NOT** install this heater in a mobile home or trailer. **DO NOT** connect a wood burning heater to an aluminum Type B gas vent. This is not safe and is prohibited by the National Fire Protection Association Code.
 3. Always connect this heater to a chimney and vent to the outside. Never vent to another room or inside a building.
 4. Be sure the masonry fireplace is clean and in a safe condition. Have the chimney inspected by the fire department or a qualified inspector. Your insurance company may be able to recommend a qualified inspector.
 5. Make sure the masonry chimney is high enough to give a good draft.
 6. Inspect the chimney twice monthly during the heating season for any deposit of creosote or soot. Such deposits must be removed. See CHIMNEY MAINTENANCE, Page 8.
 7. **DO NOT BE ALARMED IF HEATER SMOKES UPON INITIAL FIRING.** The special paint used on this heater must be cured during initial firing. This smoking will occur only on initial firing.
 8. **CAST IRON PARTS MUST BE "SEASONED" CRACKING. BUILD ONLY SMALL FIRES DURING THE FIRST FEW DAYS OF USE.**
 9. To prevent injury, do not allow anyone to use this heater who is unfamiliar with the correct operation of the heater.
 10. For additional information on using your Fireplace Heater safely, obtain a copy of the National Fire Protection Association (NFPA) publication "Using Coal and Wood Stoves Safely" NFPA No. HS-10-1978; and, "Chimneys, Fireplaces, and Solid Fuel Burning Appliances" NFPA No. 211-1980. The address of NFPA is Batterymarch Park, Quincy, MA 02269.
 11. **DISPOSAL OF ASHES** — Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.
 12. Keep the ashpit section free of excess ashes.
 13. Observe clearances to combustible materials specified in this manual to avoid a fire hazard.
 14. The metals used in construction of the heater has a light coating of oil. This could give off smoke and/or odors when heater is used for the first couple of times. This should disappear after a short period of time. Once this burn-off has occurred, it should not reoccur.
- CARING FOR PAINTED PARTS** — This heater has a painted outside jacket, which is durable but it will not stand rough handling or abuse. When installing your heater, use care in handling. Clean with soap and warm water when heater is not hot. **DO NOT** use any acids or scouring soap, as these wear and dull the finish. **PAINT DISCOLORATION WILL OCCUR IF THE HEATER IS OVER-FIRED. FOLLOW OPERATION INSTRUCTIONS CAREFULLY.**

CAUTION: Do not touch the metal or glass surfaces of the heater until it has thoroughly cooled.

chimney connection

MASONRY CHIMNEY

Before using an existing masonry chimney, clean the chimney and inspect the flue liner to be sure it is safe to use. Make repairs before attaching the heater. (See P. 2, item 4).

DO NOT connect this unit to a chimney flue serving another appliance.

The chimney used for a heater must not be used to ventilate the cellar or basement. If there is a cleanout opening at the base of the chimney, close it tightly.

If connector pipe must go through a combustible wall before entering the masonry chimney, consult a qualified mason or chimney dealer. The installation must conform to local fire codes, and NFPA 211.

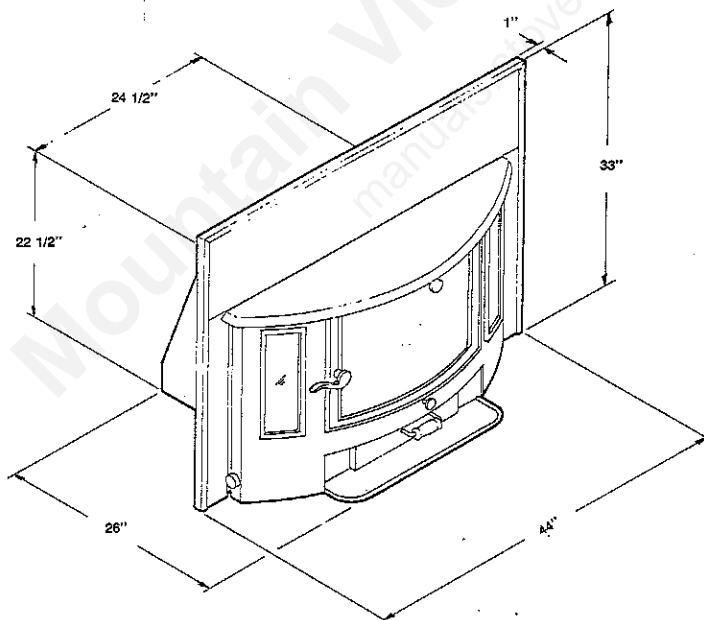


Figure 1

minimum clearances to combustible surfaces

The clearances shown below must be maintained between the edge of the Fireplace Heater and decorative wooden mantels or mantel supports. If the wood trim or mantel of your fireplace is closer to the heater than these dimensions, they must be moved to at least the dimensions shown. Failure to observe these clearances could result in ignition of the mantel or wood trim.

The brick or stone hearth extension of your fireplace must extend a minimum of 16" in front of the Fireplace Heater. Clearance to any combustible wall must be a minimum of 8" as shown.

CAUTION
KEEP FURNISHINGS AND OTHER COMBUSTIBLE MATERIALS AWAY FROM THE HEATER.

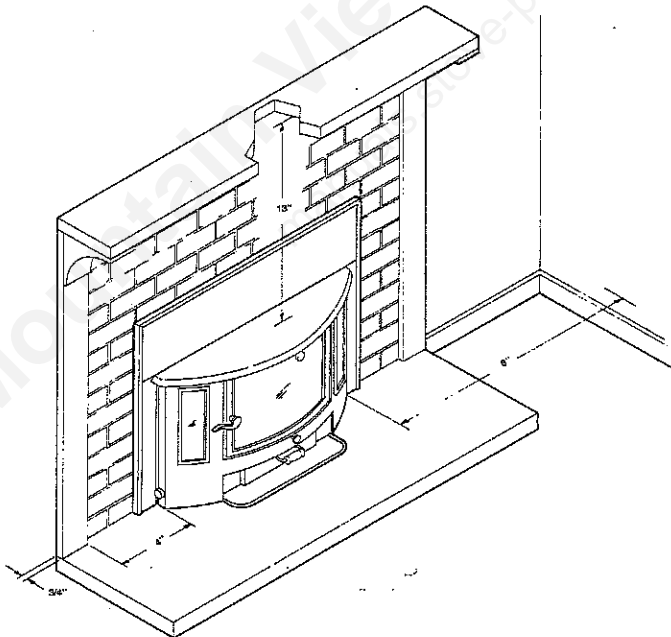


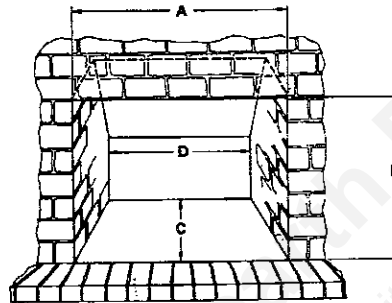
Figure 2

locating the fireplace

The heater is to be located in an existing solid masonry fireplace. This fireplace should be constructed per NFPA 211. DO NOT INSTALL THIS HEATER IN A FACTORY-BUILT METAL OR ZERO CLEARANCE FIREPLACE.

The fireplace must have a masonry chimney with an approved flue tile liner. Inspect the chimney carefully to be sure that it is clean and that the tile and masonry is in a safe condition.

Measure the fireplace width, height and depth as shown in the following Table. The fireplace opening dimensions must fall within the dimensions shown in this Table for proper and safe installation.



Fireplace Opening Dimensions

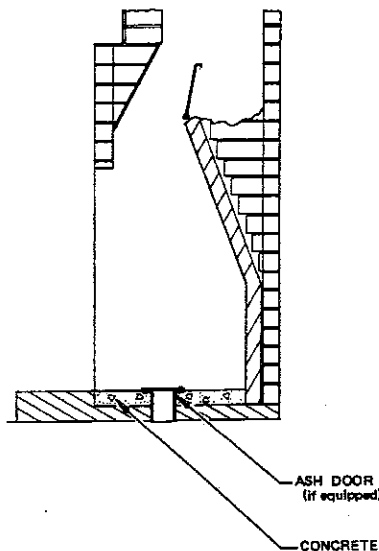
FIREPLACE OPENING DIMENSIONS	4500 FIREPLACE INSERT	
	MORE THAN	LESS THAN
A	24 3/4"	43"
B	22 1/2"	32"
C	16 1/2"	No Limit
D	24 3/4"	No Limit

installation instructions

- DAMPER** — The damper in the masonry fireplace must be removed or blocked open. The handle for the damper should be completely removed so that it cannot accidentally cause the damper to close when the heater is installed.
- LEVELING** — The heater must be level when it is installed to assure a uniform burn and to facilitate a proper fit of the trim to the front of the masonry fireplace. In addition to being level, the heater should be flush with the hearth extension so that the heater can easily slide into or out of the fireplace opening. A method is shown below for making the heater level and flush with the hearth extension:

LEVELING METHOD — If the bottom of your present fireplace is uneven or is lower than the hearth extension, it may be filled with ready mixed concrete. By mixing the concrete a little on the wet side, it will flow and be virtually self leveling.

If you have an ash cleanout door, it should be lifted enough to sit flush with the new fireplace hearth.



assembly instructions

After the fireplace hearth has been leveled, the Fireplace Heater should be slid into position. Carefully check to see that the flue opening in the Fireplace Heater is unobstructed and that the smoke leaving the heater can rise directly into the fireplace chimney.

TRIM ASSEMBLY

1. Align side trim panels with holes in insert wings. Attach with sheet metal screws provided. See Fig. 5.
2. Set top surround panel in place and attach with screws (1/4-20 x 1/2) as shown.
3. The brass surround trim can now be assembled to the insert as shown.
4. The front hood can be snapped into place after the insert is installed as shown in Fig. 5.

OPTIONAL

Using furnace cement, carefully run a bead of cement around the backside of the trim to seal all air leaks. (Fig. 6).

GASKET INSTALLATION

The adhesive-backed gasket attaches to the back side of the trim that you've just installed. This gasket will seal against the brick front of your fireplace. (Fig. 6).

1. Measure and cut the gasket material into three pieces. The two side pieces are 32" long. The top gasket is cut according to length required.
2. Carefully remove the backing from the top gasket and install it across the full width of the top trim.
3. Remove the backing from each side trim gasket and install them starting from the bottom and working up.
4. Slide the Fireplace Heater back into your fireplace until the gasket seals securely against the fireplace front.

NOTE: If your fireplace front is irregular preventing the gasket from completely sealing, please order additional gasket material. It is important that the fireplace trim seal against the front of your fireplace to obtain proper drawing in the chimney and to prevent heat loss when the Fireplace Heater is not in operation.

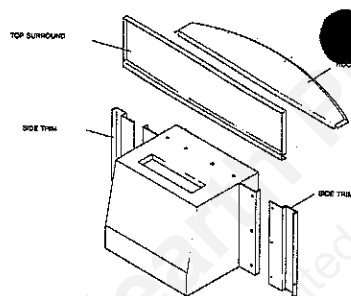
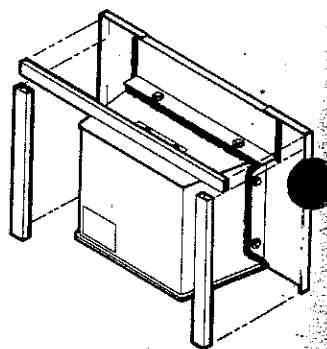


Figure 5



(OPTIONAL PROCEDURE)

Figure 6

operating instructions

FUEL:

Hardwood 20" to 22" in length, split and air dried for at least 6 months for maximum burning efficiency.

NOTE: Use wood fuel only; coal or charcoal will damage the catalytic combustor and void any warranty on the combustor.

LIGHTING THE FIRE:

1. Move the primary air adjustment slide to 'high' setting, see Fig. 7. Pull bypass damper rod out to fully open position.
2. Open the feed door and place paper and kindling on the grate for starting the fire.
3. Light paper and kindling and close feed door securely.
4. Add fuel when kindling fire is well established, be careful not to smother kindling fire.
5. After fire is burning well, wait 5 minutes and close bypass damper by pushing rod in as far as it will go.

EXTENDED OPERATION

1. The temperature in the room and the rate at which wood is burned can be controlled by adjusting the primary air slide, Fig. 7.
2. Fuel should be added in small amounts to give more complete combustion and uniform room temperatures.
3. Always open the bypass damper and the primary air slide fully before opening the feed door. This will improve the chimney draft and reduce the possibility of smoke coming into the room when the feed door is opened.
4. Empty the ashes regularly. Do not allow ashes to build up. Dispose of hot ashes properly (See Note 11, Page 2).

OPERATING TIPS:

This heater is designed to give you the maximum heat output per pound of wood. The tips given here are offered to insure you receive the best performance possible from your unit.

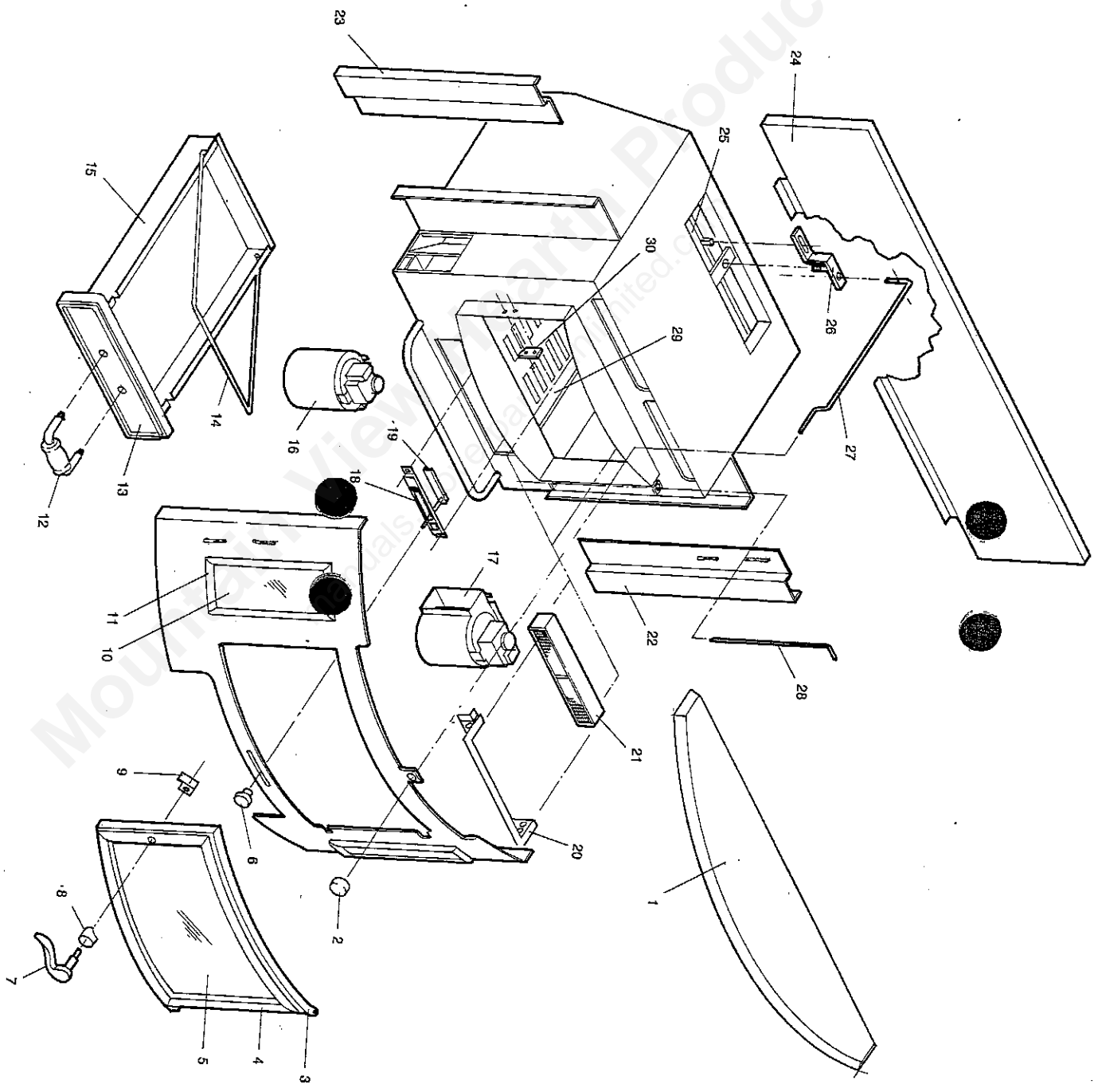
KEY CONTROLS

1. The bypass damper is one of the most important controls on your insert. If used properly, it can make a major difference in the performance of your unit. When initial fire is started, the bypass damper should be toward the open position (rod pulled out fully) as the unit heats up and the fire begins burning vigorously, the bypass damper should be closed completely (rod pushed in fully). Be sure bypass damper is fully open before opening door.
2. Primary air control; located beneath the feed door is another key factor in the performance of your insert, can be adjusted to several settings depending on the amount of heat desired.
3. The blower system is the other key factor in the performance of your unit. It should be set according to the amount of heat desired in the various firing modes.

MODES OF OPERATION:

1. **LOW FIRING MODE (OVERNIGHT):** This operation is desirable for long periods of low heat. The (3) key controls listed above would be set as follows:
(A) **BYPASS DAMPER**—entirely closed position
(B) **PRIMARY AIR CONTROL**—closed
(C) **BLOWER**—automatic setting with speed control set on low-med speed.
2. **MEDIUM FIRING MODE:**
(A) **BYPASS DAMPER**—entirely closed position
(B) **PRIMARY AIR CONTROL**—half closed/open
(C) **BLOWER**—automatic or manual setting with variable speed medium to high.
3. **HIGH FIRE MODE:**
(A) **BYPASS DAMPER**—entirely closed position
(B) **PRIMARY AIR CONTROL**—fully open
(C) **BLOWER**—manual or automatic with speed control on high speed

NOTE: When possible add small amounts of fuel each hour or so instead of adding large quantities of fresh fuel every eight to ten hours. This will give more complete combustion and keep the catalytic combustor at a higher and more efficient operating temperature.



8

9

parts list MODEL 4500

Key No.	Part No.	Description
1	68257	Hood, Front
2	89341	Knob, Damper
3	22718	Door, Feed
4	89328	Feed Door Frame
5	89311	Glass, Door
6	89336	Knob, Draft
7	89334	Handle
8	89324	Bushing, Handle
9	22729	Latch, Door
10	89337	Glass, Trim
11	89329	Ash Pit Door Assembly, Frame, Glass
12	89335	Handle, Ash Door
13	22759	Front, Ash Door
14	22723	Bale, Ash Pan
15	68256	Pan, Ash
16	80241	Blower (LH)
17	80242	Blower (RH)
18	22782	Housing, Draft
19	22724	Slide, Draft
20	22775	Screen, Air Mixer
21	89333	Combustor, Catalytic
22	22754	Panel, Trim (RH)
23	22753	Panel, Trim (LH)
24	22752	Surround, Top
25	40270	Damper, Bypass
26	22727	Damper Bracket
27	22726	Damper Rod
28	22730	Rod, Hinge
29	40268	Grate
30	22731	Catch, Door
*	88060	Gasket, Combustor
*	88042	Gasket, Ash Door (32")
*	88057	Gasket Feed Door (63")
*	88057	Gasket, Bypass (32")
*	88055	Gasket, 10' Roll
*	83859	Rod Damper, Pin
*	80004	Switch, Toggle
*	80090	Control, Speed
*	89332	Trim, Brass Surround
*	85600	Owner's Manual

* Not Shown

catalytic inspection or replacement

1. Bend the tabs on each end of the stainless steel air mixer screen up as shown in Fig. 8. Remove air mixer screen.
2. The catalytic combustor can now be removed by pulling straight out and down through feed door opening. (A note of importance: if the catalytic assembly is removed for any reason, the gasket material; Part No. 88060 around the combustor must be replaced.)
3. To replace catalytic combustor, wrap gasket material around combustor as shown, and slide assembly into place in combustor housing. Replace air mixer screen and bend tabs down into place. See Fig. 9.

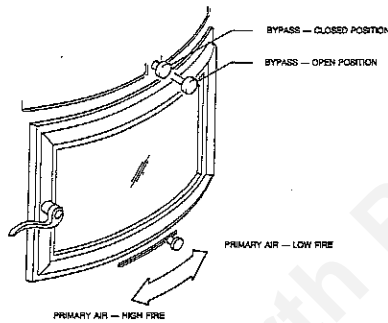


Figure 7

CAUTION
OVERFIRING OF THE HEATER MAY CAUSE A HOUSE FIRE. IF A UNIT OR CHIMNEY CONNECTOR GLOWS, YOU ARE OVERFIRING.

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 well away from the heater while it is in use.

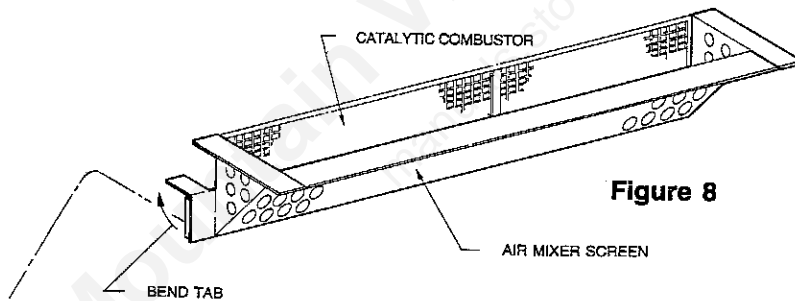


Figure 8

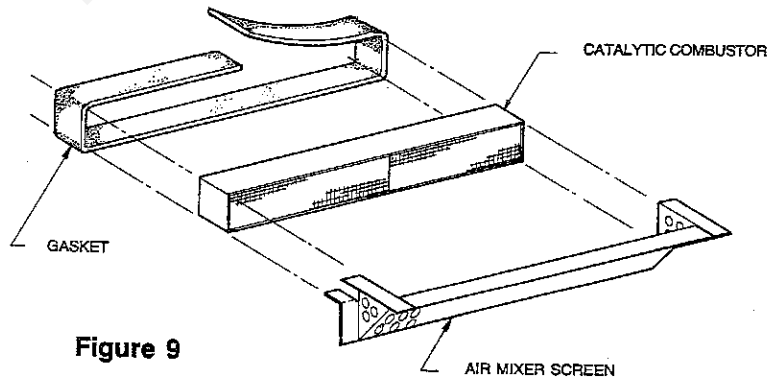


Figure 9

chimney maintenance

Creosote and Soot — Formation and Need for Removal

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

The chimney should be inspected at least twice monthly during the heating season to determine if a creosote or soot build up has occurred.

If creosote or soot has accumulated it should be removed. Failure to remove creosote or soot may cause a house fire, creosote may be removed by using a chimney brush or other commonly available materials.

Chimney fires burn very hot. If the chimney catches fire, immediately call the fire department, then reduce the fire by closing the inlet air control.

CAUTION:

A chimney fire may cause ignition of wall studs or rafters which you thought were a safe distance from the chimney. If you have a chimney fire, have your chimney inspected by a qualified person before using again.

service hints

Do not expect a heater to draw. It is the chimney that creates the draft. Smoke spillage into the house or excessive build up of water or creosote in the chimney are warnings that the chimney is not functioning properly. Correct the problem before using the heater.

Possible causes are:

1. The chimney used for this heater must not be used for any other appliance.
2. The chimney used for this heater must not be used to ventilate cellar or basement.
3. If there is a cleanout door at the base of the fireplace chimney, close it tightly.
4. If the chimney is remaining too cool, water will condense in the chimney and run back into the fireplace. Creosote formation will be rapid and may block the chimney. Operate the heater at a high enough fire to keep the chimney warm preventing condensation.
5. If the chimney does not seem to draw or if smoke spills into the house from around the trim, be sure that the trim gasket is sealing tightly against the fireplace front.
6. If the fire burns well but sometimes smokes or burns slowly, it may be caused by the chimney top being lower than another part of the house or a nearby tree. The wind blowing over a house or tree falls on top of the chimney like water over a dam, beating down the smoke. The top of the chimney should be at least 2 feet higher than any point of the roof within 10 feet.

Caring For Painted Parts — The paint baked onto the steel or iron is very durable but it will not stand rough handling or abuse. When installing your heater, use care in handling. Clean with soap and warm water when heater is not hot. DO NOT use any acids or scouring soap as these wear and dull the finish. PAINT DISCOLORATION WILL OCCUR IF THE HEATER IS OVERFIRED. FOLLOW OPERATING INSTRUCTIONS CAREFULLY.

blower operation

The blower assembly is equipped with a thermostat to automatically switch on the blower 15 to 20 minutes after firing the heater.

AUTOMATIC OPERATION

1. Plug the service cord into a 120V., 60 HZ outlet.
2. Switch the toggle switch to the auto (automatic) position.
3. Turn the speed control clockwise from the off position to the minimum (decrease) setting.
4. The blower will switch "ON" automatically when the firebox reaches proper temperature. The time period needed for the blower to operate on automatic depends on the mode of operation (see p. 6, "Operating Tips," etc.)
5. Adjust the blower speed control to the desired output.

MANUAL OPERATION

1. Plug the service cord into a 120V., 60 HZ outlet.
2. Switch the toggle switch to the man. (manual) position.
3. Turn the speed control clockwise to the desired blower output.

NOTE: Keep all debris, ashes and any other objects away from blower hearth, as it may cause permanent damage to blower and VOID the warranty.

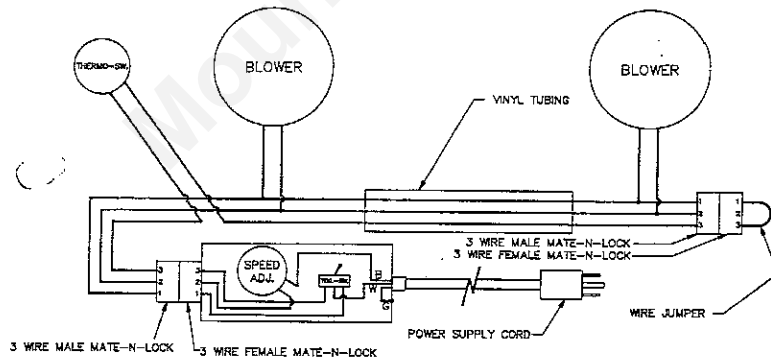


Figure 10

owners manual

HOW TO ORDER REPAIR PARTS AND OPTIONAL KITS

THIS MANUAL WILL HELP YOU TO OBTAIN EFFICIENT, DEPENDABLE SERVICE FROM THE HEATER, AND ENABLE YOU TO ORDER REPAIR PARTS CORRECTLY.

KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.

WHEN WRITING, ALWAYS GIVE THE FULL MODEL NUMBER WHICH IS ON THE NAMEPLATE ATTACHED TO THE FRONT OF THE HEATER.

WHEN ORDERING REPAIR PARTS OR OPTIONS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER
 2. The PART DESCRIPTION
 3. The MODEL NUMBER: 4500
 4. The SERIAL NUMBER
-

UNITED STATES STOVE COMPANY
P.O. BOX 5349 — Chattanooga, Tennessee 37406 — (615) 698-3435