



MODEL C60-F ASHLEY WOOD BURNING CIRCULATOR HEATER

Installation, Operation and Maintenance Instructions

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IMPORTANT GENERAL INFORMATION

To assure that satisfactory and safe service is received from this heater:

1. Read these instructions entirely before beginning any part of the installation.
2. Use these instructions as a guide during the installation of the heater.
3. Be sure these instructions become the property of and are reviewed by all future users of this heater to encourage proper operation and maintenance of this appliance.

This heater is designed to burn wood only and provide heat to one or more rooms. Because of its heat radiating characteristics, this heater must be installed as an unenclosed, freestanding unit with clearances to combustibles as specified by these instructions. This heater must be connected to an Underwriters' Laboratories, Inc. listed factory-built Residential Type And Building Heating Appliance chimney or a properly constructed and maintained masonry chimney.

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

This heater is not designed to burn coal, liquid fuels, gaseous fuels or household refuse. Any attempt to burn these type fuels, to enclose the heater or to attach the heater to an air circulation system or a stoking device can be very hazardous. THIS HEATER IS NOT DESIGNED TO BE USED IN A MOBILE HOME.

HOW THIS HEATER OPERATES

The chimney draft draws in combustion air through an adjustable air inlet thermostat located inside the cabinet. Air flows through and across the bed of fuel, causing the fire to progress through the fuel bed. Heat is transferred to the air that flows between the cabinet and the firebox. Any attempt to alter this flow of air by connecting this heater to a duct system or air movement fans other than the optional UL listed blower, available from your Ashley dealer, can lead to improper and possibly hazardous operation of this heater.

BUILDING CODES AND SAFETY STANDARDS

These instructions comply with the applicable National Fire Protection Association and Underwriters' Laboratories, Inc. Standards for the installation and operation of this type heater. Before beginning the installation, you should check with local building officials to assure compliance with local regulations and codes.

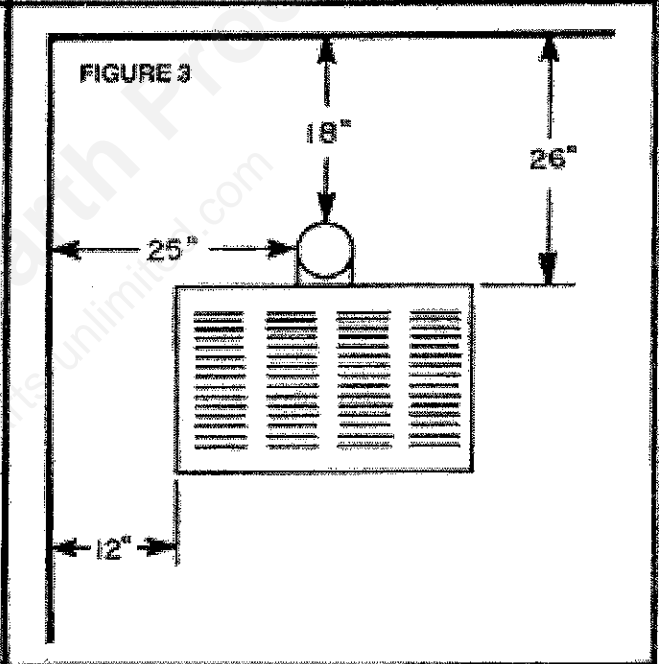
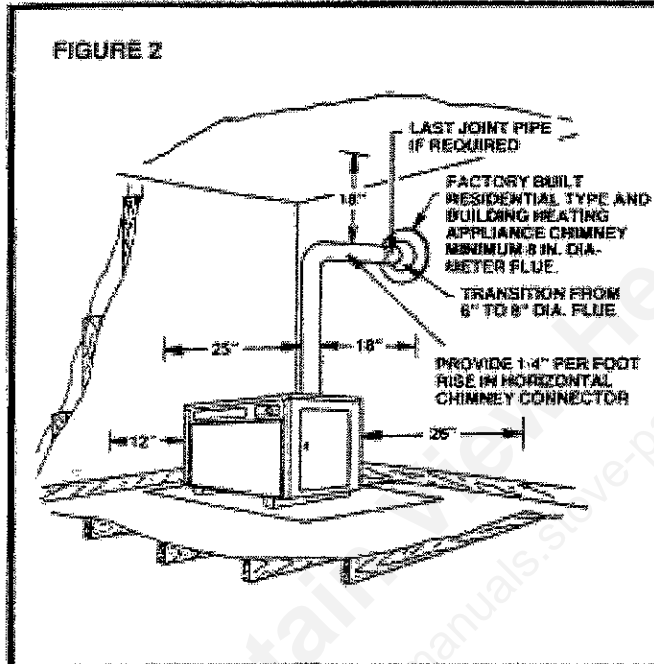
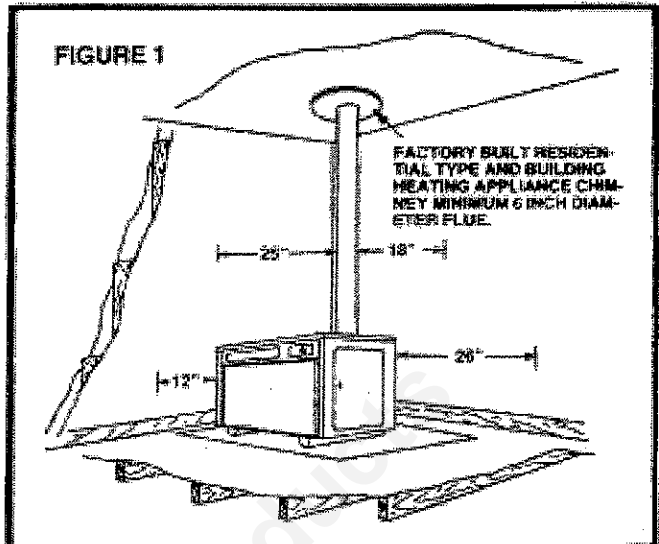
Look for the Underwriters' Laboratories, Inc. listing mark on your heater.

SELECTING A LOCATION FOR THE HEATER

When selecting a location for the heater, be sure attention is given to the following considerations:

1. If the heater is to be vented into a factory-built Residential Type And Building Heating Appliance chimney, review the installation instructions for the chimney to comply with requirements for proper chimney location, height, space requirements, etc.
2. If the heater is to be vented into a masonry chimney, the heater should be located as near the chimney as possible without failing to comply with the requirements for minimum spacing between the chimney connector, heater and combustibles. (Be sure chimney is constructed according to NFPA standards.)

- The location of the heater must provide at least the minimum clearances between the heater, chimney connector and combustible materials as specified by figures 1, 2, and 3.
- If the heater is to be located on a combustible floor, there must be suitable floor space to install a floor protector beneath and extending beyond the heater as shown by figure 4.
- The heater should be located centrally within the area where heat is desired but out of traffic areas to minimize the likelihood of persons accidentally contacting the hot surface of the heater.
- The heater should be located away from doorways and central heat outlets and inlets to reduce the chances of drafts blowing smoke, ashes or sparks out of the heater during refueling or ash removal.
- The heater should be located where a small supply of wood may be kept conveniently close but not within 36 inches of the heater.
- Locate the heater so that drapes, curtains, furniture and other combustible materials will not be closer than the clearances shown in figures 1, 2, and 3.

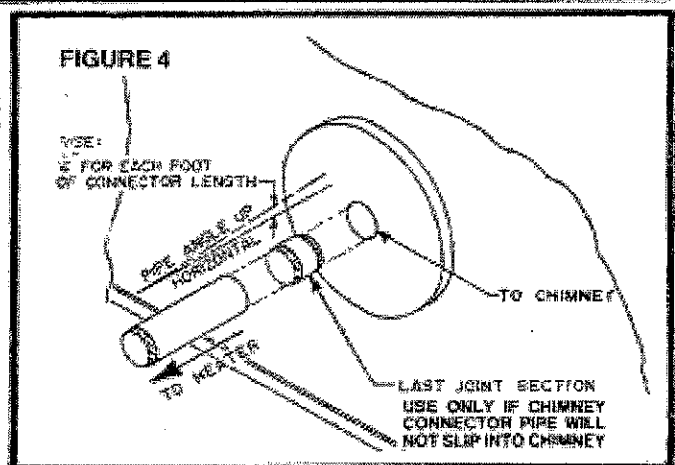


CHIMNEY CONNECTOR AND CHIMNEYS

It is very important to assure safe and satisfactory performance from your heater that it be properly connected to a correctly constructed and maintained chimney.

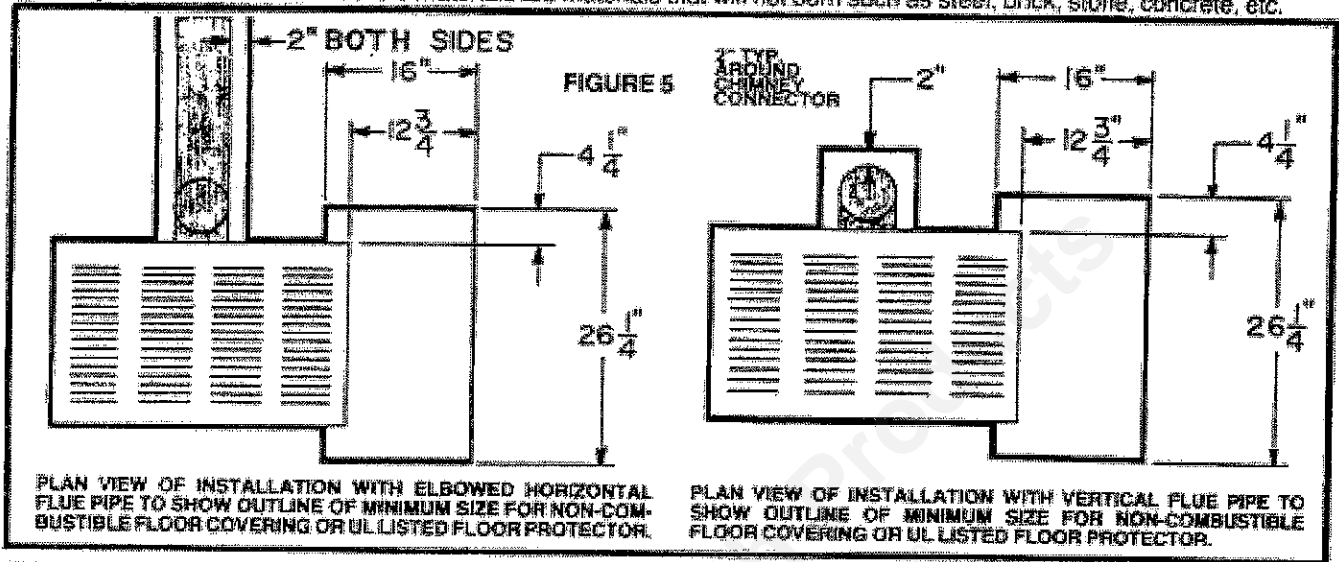
The chimney connector (pipe from heater to chimney) must be 6 inches in diameter and made from 24 gauge or heavier blued or cold rolled steel. The length of the chimney connector and number of elbows used should be kept to a minimum. Do not use more than two 90 degree elbows in the chimney connector. Installations which require the use of more than one 90 degree elbow in the chimney connector must be vented into a flue at least 8" in diameter or 8" squares. See figure 2. Moisture that might collect in the chimney should be directed to the heater by providing a slope of 1/4 inch per foot in a horizontal run of the chimney connector and installing all pipes with the male end toward the heater. See figure 4.

Be sure all chimney connector joints are sealed with furnace cement and secured with 3 screws.



FLOOR PROTECTION

This heater has been designed to prevent excessive temperatures on the floor beneath the heater. It is important, however, that a combustible floor be protected by a noncombustible floor covering or U.L. listed floor protector beneath the heater and extending beyond the heater as shown by figure 5. The floor covering is required to prevent damage or possible ignition from sparks or glowing embers that might escape the heater during refueling or ash removal or could drop from the joints of the chimney connector. Noncombustible materials are materials that will not burn such as steel, brick, stone, concrete, etc.



TOOLS AND SUPPLIES NEEDED FOR INSTALLATION

Electric drill 1/4 or 3/8 inch drive

1/8 inch drill bit

1/4 inch drill bit

Screwdriver (blade type and size to fit screws listed below)

No. 8 sheet metal screws (3 for each joint of chimney connector)

10-24 x 1 Bolts, nuts and lockwashers (2 required)

Can or tube of furnace cement

Floor protector

Rag or several paper towels

Chimney connector pipes (and elbows, if required)

UNPACKING AND INSPECTION

Remove the heater from the packaging materials. Inspect the heater for external damage or missing parts. Check the gaskets around the doors to assure that they are still in place. Check the inside of the heater. If any parts are found to be damaged or missing, report these to your dealer and make sure all problems are resolved before installing the heater.

INSTALLATION PROCEDURE

1. Install a factory-built Residential Type And Building Heating Appliance chimney, build a masonry chimney or adapt an existing masonry chimney to vent the heater.
2. Purchase the 6 inch diameter chimney connector pipes that are required.
3. If the heater is to be installed on a combustible floor, purchase a noncombustible floor protector and install it in the proper location. See figure 5.
4. Assemble the chimney connector sections to determine if the chimney connector will correctly extend from the heater flue collar to the chimney. The chimney connector should extend at least two inches into the flue of a factory-built chimney. When making a horizontal connection to a masonry chimney, the connector should extend to the inside face of the vertical flue liner, (see figure 8) and slope upward from the heater to the chimney 1/4 inch per foot of horizontal run.
NOTE: The inside diameter of some chimney thimbles are too small to accept a standard six inch diameter chimney connector pipe. If you encounter this problem the last joint pipe included with your heater can be used as shown by figures 2, and 4. Be sure the last joint pipe is securely attached to the chimney connector with screws and sealed at each end with furnace cement.
5. After it is determined that the assembled chimney connector will properly connect the heater to the chimney, disassemble all sections in preparation for the first assembly procedures.
6. Position the first section of chimney connector pipe inside the heater flue collar and drill two 1/4 inch diameter holes in the pipe section to match the holes in the flue collar.
7. Apply furnace cement to the mating surfaces of the flue collar and chimney connector pipe so that an airtight seal is formed as the pipe is put into place and fasten the pipe joint in place with 10-24 bolts, nuts and lock washers.
8. Assemble the remaining sections of chimney connector by applying furnace cement to each joint, drilling 1/8 inch diameter holes for and attaching each joint with 3 sheet metal screws.
9. Wipe all excess furnace cement from the pipe joints with a rag or paper towels.

HEATER OPERATION

THE PAINT ON THE EXTERIOR OF THE FIREBOX WILL GO THROUGH A CURING PROCESS DURING THE FIRST FIRING OF THE HEATER AND WILL EMIT SOME SMOKE AND ODOR. BE PREPARED FOR THIS BY RAISING A WINDOW OR OPENING A DOOR TO PROVIDE VENTILATION.

The first time the heater is fired, the fire should be regulated so as to increase in intensity gradually to allow the paint to cure slowly and the other components to adjust to their expanded size.

To Build a Fire:

1. Set the thermostat to the "HI" position.
2. Open the feed door (see figure 6) and lay paper and/or kindling on the grate in sufficient quantities to ensure continued ignition.

WARNING: 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. FAILURE TO COMPLY WITH THIS WARNING COULD CAUSE AN EXPLOSION.

3. Light the fire.
4. Close the feed door (see figure 6) and the ash door.
5. Add larger pieces of wood as the fire gains in intensity. As soon as the fire is established, wood may be added as desired.

CAUTION: OPERATING THE HEATER WITH THE ASH DOOR OR FEED DOOR OPEN CREATES AN ABNORMAL FIRING CONDITION WHICH CAN OVERHEAT THE HEATER, CHIMNEY AND ADJACENT COMBUSTIBLE MATERIALS. THIS CAN DRASTICALLY SHORTEN THE HEATERS LIFE AND VOID THE FACTORY WARRANTY.

6. MAKE SURE THAT THE FEED DOOR, ASH DOOR AND CABINET DOOR ARE SECURELY CLOSED.
7. Set the thermostat to a point midway between "HI" and "LO". If the house or heating situation requires a higher or lower setting to obtain the desired amount of heat, adjust the thermostat setting appropriately.

Firetending

Firetending is the occasional poking or stirring of the burning fuel bed to ensure airflow through the fire and adding new wood as needed. With experience, you should determine how often fire tending is required to maintain the desired heat output of the heater. To ensure safe and satisfactory performance of the heater, the following rules should be observed:

1. **KEEP THE FEED AND ASH DOORS CLOSED EXCEPT WHEN TENDING THE FIRE OR REMOVING ASHES.** Operating the heater with the doors open can cause the heater to overheat and will increase the possibility of smoke, ash or sparks escaping the heater and damaging the dwelling or its contents.
2. **NEVER OPEN THE FEED DOOR WITHOUT FIRST TURNING THE THERMOSTAT TO "HI" FOR AT LEAST 30 SECONDS.**
3. **ADD ONLY SMALL AMOUNTS OF FRESH WOOD TO THE HEATER AT EACH REFUELING.** Adding large amounts of fresh wood can cause an accumulation of gases above the fire that can cause minor explosions called backpuffing. Backpuffing can occur whenever concentrated gases accumulate over the fire bed and then catch fire quickly. This may cause smoke and flame to be expelled from the heater during fire tending but under rare conditions, backpuffing can be severe enough to break apart poorly connected chimney connector pipes. If backpuffing is experienced, see **CORRECTION OF OPERATIONAL PROBLEMS** section of this manual. This is an abnormal condition and a potential hazard. Determine and correct the cause.

Adding large amounts of wood to the fire causes a rapid cooling of the chimney and the release of excessive amounts of water vapor up the chimney. This can cause excessive creosote accumulation in the chimney. Refer to the heater and chimney maintenance section of this manual for more information concerning creosote.

4. **TURN THERMOSTAT TO "HI" FOR 15 MINUTES AFTER ADDING FRESH WOOD TO A FIRE.** This allows the gases to be driven off and shortens the length of time the dense smoke is likely to deposit creosote on the chimney walls.
5. **DO NOT TAMPER WITH THE INTERNAL THERMOSTAT MECHANISM.** The thermostat has been designed and calibrated to provide continuous control of the fire for safety and efficiency. Thermostat adjustments are made with the thermostat control knob only. (See figure 7.)
6. **PREPARE THE HEATER TO HOLD FIRE ALL NIGHT BY LOADING IT WITH WELL DRIED WOOD AT LEAST AN HOUR BEFORE BEDTIME.** Burn the heater at the normal rate for this hour, then turn it back to a slower burn just before going to bed. This procedure will help drive excess moisture and gases out of wood and minimize creosote buildup during the night. This procedure also minimizes the likelihood of backpuffing.
7. **DO NOT OVERFIRE THE HEATER.** If any part of the heater or chimney connector becomes red hot, turn the thermostat to low and keep the ash and feed doors closed until the heater cools.

MINIMUM FIRE ADJUSTMENT

Creosote is more likely to accumulate in the chimney connector and chimney liner during extended periods of low firing. This accumulation can be reduced by proper setting of the air shutter on the ash door. (See figure 7.)

Rotating the air shutter to allow more air into the fire chamber will increase the rate of the minimum fire and reduce the accumulation. Experience in a particular heating situation will give guidance in choosing the best setting. Setting changes are made with common pliers. Set the shutter to the largest opening and use a smaller opening only if the heat output cannot be adequately controlled by the thermostat.

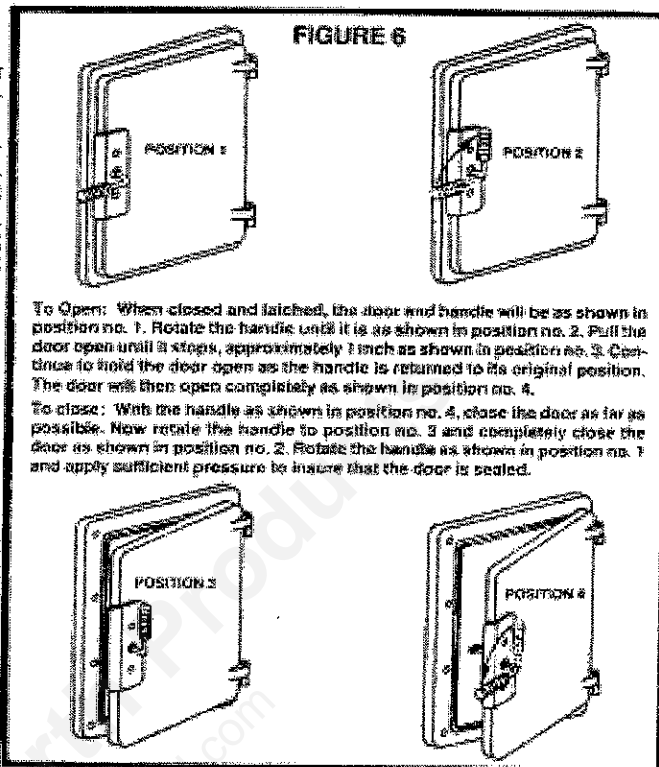
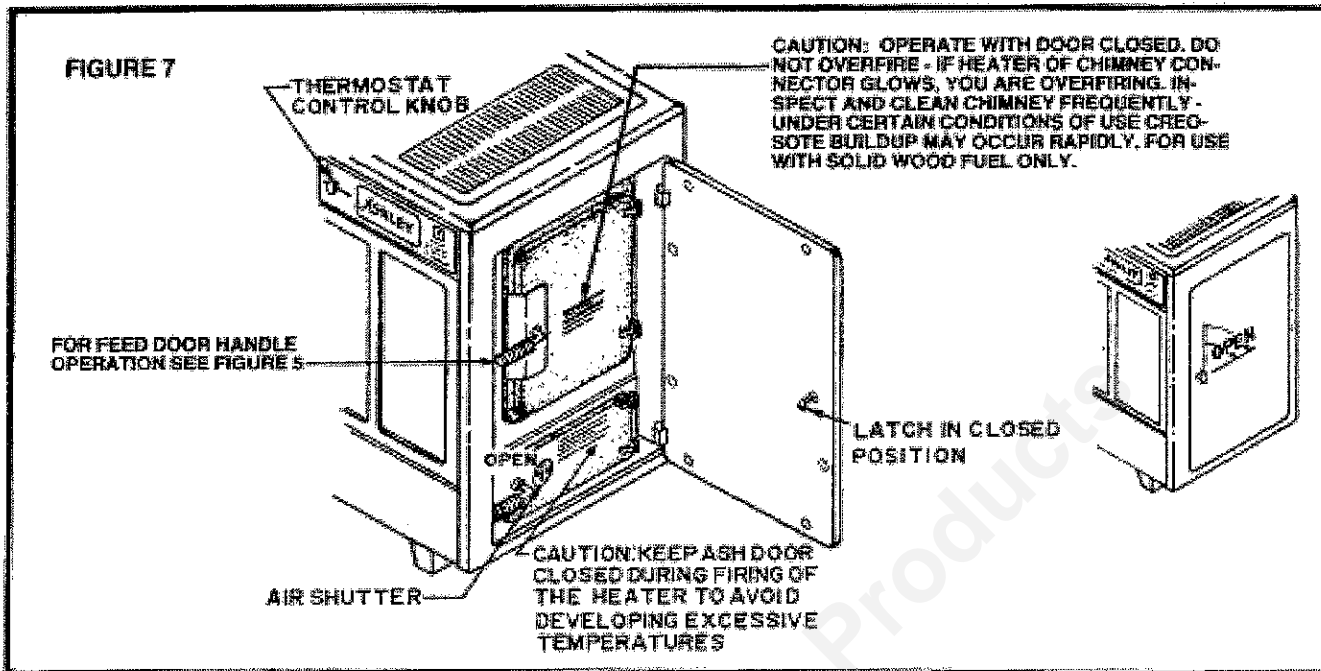


FIGURE 7



WOOD STORAGE

The small amounts of wood used in daily fire tending should be kept in a noncombustible container at least 36 inches from the heater.

Two wood characteristics largely determine the amount of heat energy per cord. The first is moisture content. Wood must be dry before it will burn properly. When first cut, its moisture content is high so wood burns poorly and encourages the formation of creosote. It should be cut and stored in a dry place several months, preferably a year before it is used. Splitting the wood before it is stored reduces its drying time and exposing both ends to the air aids in drying. After wood has been stored from six to twelve months, it will be dried to a moisture content of 15 to 25 percent. This drying results in more even burning and will minimize the buildup of creosote in your chimney.

The second factor determining heat output of wood is its density or weight per cord. With equal seasoning and dryness, heavier, denser wood has more heating value per cord. For example, hickory is denser wood than pine, so a cord of hickory will give more heat than a cord of pine.

For more specific information on how to select and obtain good fire wood, obtain the U.S. Department of Agriculture--Forest Service Leaflet No. 559 by writing to Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.

For longer and safer heater life, never use manufactured composition logs, salt water soaked wood (driftwood), or chemical additives in this heater.

HEATER AND CHIMNEY MAINTENANCE

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

Wear noncombustible gloves to protect your hands from hot surfaces when removing the ashes from the heater.

Ashes should not be allowed to accumulate until they obstruct the airflow through the fuel bed. If ashes are allowed to accumulate to within two inches of the bottom of the grates, poor burning of the fuel is likely, and the grates will be damaged from overheating.

Chimney Connector and Chimney

Creosote - 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 connector and chimney should be inspected at least twice monthly 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.

A chimney fire is usually indicated by a roaring noise within the chimney and/or a pinging noise within the chimney connector. Well developed chimney fires will emit ash and sparks from the top of the chimney.

If a chimney fire occurs, turn the thermostat to "LOW", keep the fuel, ash and cabinet doors closed, call the fire department and protect the roof by wetting it with a garden hose or buckets of water. After the chimney fire is over, thoroughly inspect all combustible materials around the chimney and chimney connector for fires that might have been ignited by the intense heat. The chimney and chimney connector should then be inspected for any damage and repairs made if necessary.

Although a properly constructed chimney should not be damaged by a chimney fire, it is best to prevent a chimney fire by:

1. Burning well seasoned wood. Green or wet wood increases the chances of creosote forming.
 2. Not burning small smoldering fires for long periods of time. Small smoldering fires tend to allow the chimney to stay relatively cool, increasing the chances of creosote forming. A small load burning quickly is far better than a large smoldering load. Less wood and less chimney cleaning will be required if smaller loads are burned in this manner.
 3. Cleaning and inspecting the chimney regularly (inspect at least twice monthly during heating season to determine if creosote buildup has occurred).
 4. Preparing the fire for night burning properly (see item 6 under FIRE TENDING).
- There are special brushes available for chimney cleaning and many areas have professional chimney cleaning services. Most fire departments will make free chimney inspections and can provide help in locating chimney services.
(YOU SHOULD ALWAYS CLEAN AND INSPECT YOUR CHIMNEY BEFORE EACH HEATING SEASON.)

Heater Maintenance

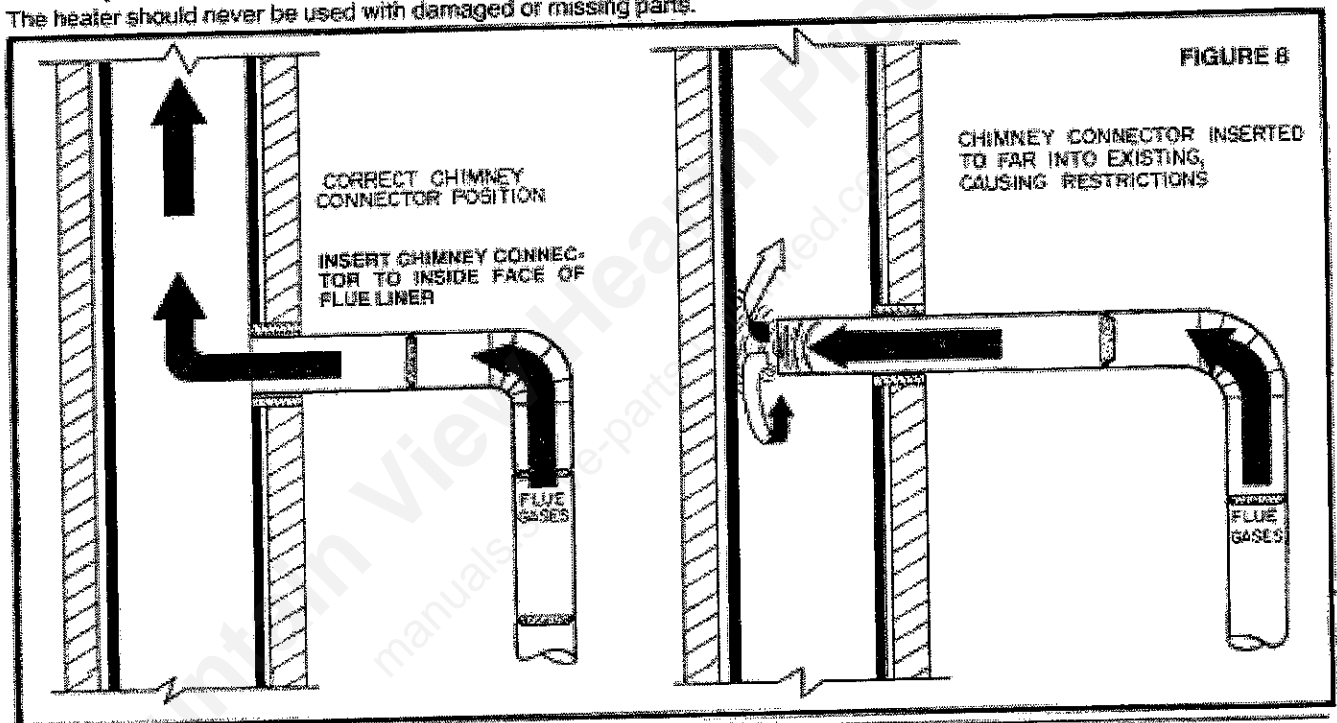
The painted surfaces of the heater may be wiped free of dust with a soft cloth. The use of any other cleaning method may damage or remove the paint.

Check the following items regularly during the heating season to ensure proper heater operation:

1. Condition of feed door and ash door gaskets--replace if excessive wear is observed.
2. Condition of feed door, ash door and cabinet latching pawls and handles--ensure that operation will securely close the door. Adjust as necessary.

At the end of each heating season, the heater should be thoroughly cleaned of all ashes. Ashes remaining in the heater in combination with moisture in the air can cause severe corrosion of the heater. All rust spots on the heater should be wire brushed and covered with a coat of high temperature paint. If the heater is to be stored until the next heating season, be sure the storage area is dry.

The heater should never be used with damaged or missing parts.



CORRECTION OF OPERATIONAL PROBLEMS

1. Symptom: Fire rate does not increase with thermostat open or smoke spilling from feed door when tending fire or backputting.
 - a. Chimney connector pushed too far into a masonry chimney thimble restricting draft.
 - b. Chimney or chimney connector restricted with creosote.
 - c. Chimney draft reduced by air entering through:
 - Unsealed chimney clean-out access.
 - Loose mortar or cracked chimney wall.
 - Holes in rusted chimney connector.
 - Incompletely sealed chimney connector joint or thimble.
 - d. Downdraft in too large chimney or chimney with no top cover.
 - e. Combustion air inlet blocked with ashes.
 - f. Chimney too short.
2. Symptom: Fire rate too high when thermostat closed:

Check for:

 - a. Feed door or ash door not securely closed.
 - b. Feed door or ash door gasket worn excessively.
 - c. Minimum fire shutter setting too large. (See Minimum Fire Adjustment.)