

INSTALLATION & OPERATION INSTRUCTIONS FOR

Warm Morning COAL HEATERS

MODELS 523, 617 & 414

TESTED FOR SAFETY BY ARNOLD GREENE TESTING LABORATORIES, INC.
COMPLIES WITH UL-1482

WARM MORNING Coal Heaters operate on an advance principle. Patented firebrick flue which WARM MORNING pioneered, gives better performance and more economical heating with all kinds of coal. However, to insure the full benefits of this exclusive design, your WARM MORNING heater should be carefully installed and certain operating rules followed.

NOTE: This stove is not approved or recommended for use in mobile homes.

INSTALLATION

WARNING: The installation of this stove must comply with state and local requirements and be inspected by the state or local building inspector, if required.

1. An Adequate Chimney Needed

A chimney of proper construction and adequate size and in good condition is absolutely essential for a satisfactory and safe installation of a WARM MORNING Coal Heater.

a. The chimney should be of a brick or masonry construction with tile or mortar lining, or it may be a U.L. listed Residential Type and Building Heating Appliance Chimney.

Note: Use of aluminum Type B gas vent for solid fuels is unsafe and prohibited by the National Fire Protection Association Code.

b. The overall height of the chimney from the flue outlet of the heater to the top of the chimney will determine how well it will "draw". This height should be no less than 10 feet if there are no elbows in the flue connection and at least 15 feet if there is an elbow. No more than 2 elbows should be used under any circumstances.

c. The chimney should be straight from top to bottom without offsets or obstructions.

d. It should be extended at least 3 feet above the roof at the point it emerges and at least 2 feet away from any eave or portion of the house within 10 feet.

e. The inside of the chimney should be at least equal in area at the narrowest point to the inside area of the coal heater flue pipe.

IMPORTANT: Therefore, for reasons stated above, a necessary first step is a careful inspection of the chimney. Look for loose bricks or mortar flyash or soot accumulation or other obstructions. If necessary have chimney cleaned or repaired before installing WARM MORNING Coal Heater.

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

2. Location and Placement

a. Locate the heater as close to the chimney inlet as possible to provide for these minimum clearances:

Allow at least 36 inches between the heater and any wall or combustible surface. Also allow at least 18 inches between flue connector and nearest wall or ceiling.

b. Place the heater on a floor protector constructed of $\frac{3}{8}$ " thick asbestos millboard or equivalent. The following areas must be covered:

1. Under the room heater.

IMPORTANT!

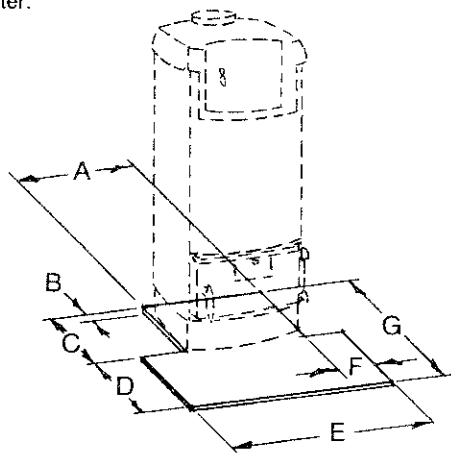
FOR YOUR SAFETY, OBSERVE THESE PRECAUTIONS:

1. Be sure your heater is vented to a proper type and size of chimney that meets The National Board of Fire Underwriters Code and any applicable local codes.
2. Place the heater on a floor protector constructed of $\frac{3}{8}$ " thick asbestos millboard or equivalent.
3. Because of the high surface and radiant temperatures generated by this heater, it should be located out of traffic and away from furniture, curtains and drapes.
4. Children and adults should be alerted to the hazard of high surface temperatures and should be kept away to avoid burns or clothing ignition.
5. Young children should be carefully supervised when they are in the same room with the heater.
6. Do not place clothing or other flammable material on heater, or use flammable cleaning fluids near it.
7. Do not operate heater in tightly closed room. Combustion of any fuel requires oxygen. Adequate ventilation is a must.
8. Installation and repair should be done only by a qualified service person. The heater should be inspected before use at the beginning of each heating season.

2. 16" in front of and 6" to either side of the fuel loading and ash removal doors.

3. Under the chimney connector and 2" to either side.

For proper floor protector size, match dimension on chart with your heater.



MINIMUM SIZE STOVE BOARD
ASBESTOS MILLBOARD $\frac{3}{8}$ " THICK OR EQUIVALENT

	A	B	C	D	E	F	G
414 B	16"	1 $\frac{1}{2}$ "	16"	16"	32"	8"	32"
617 C	18"	1 $\frac{1}{2}$ "	18"	16"	34"	8"	34"
523 C	20"	1 $\frac{1}{2}$ "	20"	16"	36"	8"	36"

3. Making the Flue Connection

It is very important that the flue pipe connector between a coal heater and the chimney be tight and secure.

The Models 617 and 414 are equipped with a 6 inch reversible oval shape flue collar. (A 6" oval to 6" round adaptor has been supplied with these units.)

The Model 523 has a 7 inch reversible oval shape flue collar. A 7" oval to 6" round adapter has been supplied with this unit so it may be connected to a 6 inch flue pipe.

If the stove is being vented through a combustible wall or ceiling, an approved non-combustible insulated flue thimble must be used.

The Barometric draft control must be installed on the oval to round adaptor that is supplied with the heater. See section entitled "Barometric Draft Control" and also notice illustration.

THIS IS IMPORTANT: Each stovepipe joint should be secured with three (3) sheet metal screws to avoid possible separation during use.

Do not use more than two 90 degree elbows between the heater outlet and the chimney inlet. Avoid using long runs of horizontal pipe and where the flue pipe runs horizontally it should slant upward toward the chimney inlet at least one inch for each section of flue pipe (36 inches).

NOTE: Chimney connector (flue pipe) must be of proper diameter and be constructed of corrosion resistant steel (blued-pipe, galvanized, etc.) of a thickness not less than 24 gauge (.024 inch).

Assure that the chimney connection pipe extends at least 2" into the chimney, but does not extend so far into the chimney flue that it blocks air flow.

OPERATION

1. Selection of Coal

Your WARM MORNING Coal Heater will satisfactorily burn all types of coal. The size is more important than the kind of coal used.

Any size coal can be used, but best results will be obtained with sizes such as stovenut or chestnut — that is ranging in size from walnut to the size of an orange. **NOTE:** Use of small particles of coal or fine coal dust may cause spillage.

2. Starting A Fire

(Build Fire Directly on Grates)

To start a fire, open draft slide on ash door and slide register on coal feed door for secondary air. Place paper and a small amount of dry kindling on the grates. Light the paper and add a small amount of coal (approximately one layer on top of the kindling). Close the coal feed door.

To add coal, after fire is burning well, close draft slide on ash door. Open coal feed door and add one shovel-full every ten minutes until

the coal bed is within one inch but not above the top of the firebrick flues.

After filling stove with coal, wait until flames are coming up the firebrick flues, then close secondary draft slide on feed door and adjust ash door draft slide to maintain desired burning rate.

CAUTION: 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.

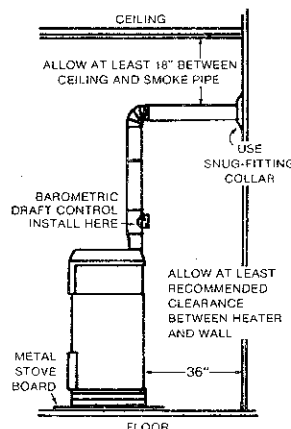
CAUTION: Be careful to avoid over heating of the stove. Some kinds of coal require a very little draft for burning in a WARM MORNING heater. (A few trial settings should determine the proper point to develop the heat desired.)

DO NOT OPERATE WITH ASH DOOR OPEN.

To hold fire, close ash door draft slide.

The WARM MORNING principle of burning is slow combustion of a large mass of coal, making coke out of the coal and then burning the coke without smoke or soot. After the fire is burning well, only a minimum of attention is required for controlled operation of the heater. The coal feeds down gradually of its own weight. It need never be out during the entire winter. Additional coal can be added gradually as the bed of coke burns down in the magazine.

To shake down ashes, Do Not Open The Ash Door, but insert shaker handle through draft slide opening in ash door — then shake grate from left to right. Stop when the first red sparks appear in the ash pan. Leave some ash on grates to protect them from intense heat. **Always Empty Pan When Level Full.** The space between the ash pan and the grate is needed for circulation of air to prevent burning out or warping the grate castings.



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.

SAFETY PRECAUTIONS

1. Provide Air for Combustion

Combustion of any type fuel requires oxygen (AIR). Be sure adequate make-up air is provided to the room where the heater is located. Some homes may have enough air infiltration to provide adequate make-up air to the heater, but if your home is well-insulated and weather stripped, an opening of approximately 100 square inches should be provided to permit the necessary outside air for proper and safe combustion.

2. Avoid Contact with Hot Surface

The surface of any properly functioning space heater will be HOT and can set combustible material, like clothing or drapes on fire. It can also seriously burn you if it is touched. Babies and young children should be kept away from the heater, or carefully supervised when they are in the same room with it.

OPERATING PROBLEMS

The most common problems are the result of too little chimney draft or a "down-draft" — either of which may cause smoke to escape out the coal feed door at time of refueling. After refueling, smoke and gases may accumulate in the top of the heater faster than the chimney draft will carry them away and, when ignited, cause a "puff-pack".

Therefore, if you have followed carefully the HOW TO FIRE instructions above and yet your heater does not operate satisfactorily, look first for the cause and remedy in:

1. Firebrick Flue Passages

The firebrick flues are to a large extent self-cleaning, but should be checked occasionally to make certain they are clean. If coal or ashes have accumulated in the flues, clean them out with a piece of stiff wire.

2. Chimney

The chimney must provide adequate draft for your heater to burn satisfactorily. Check the stove pipe and chimney for leaks and/or obstructions.

Chimney down-drafts are usually caused when the top of the chimney is lower than the peak of the roof or adjoining buildings or objects. The chimney ventilating cap (if there is one) should not be smaller than the chimney opening. The flue should run full-size all the way up to the top. Broken mortar joints, chimney, and too many appliances connected to the chimney will also restrict chimney draft. Adequate chimney draft is the primary and most important requirement for any heating appliance.

3. Protecting the Grates

The grates in your heater will last indefinitely if given proper care, but can be burned out in a short time if subjected to overheating.

When the heater is new, or when new grate castings have been installed, operate the heater at a moderate rate for several days. This "Tempers" the grates for normal usage.

DO NOT SHAKE THE FIRE TOO MUCH, it isn't necessary. Stop when the first red sparks appear in the ash pan. (Be sure to read paragraph headed, "To shake down ashes").

BAROMETRIC DRAFT CONTROL

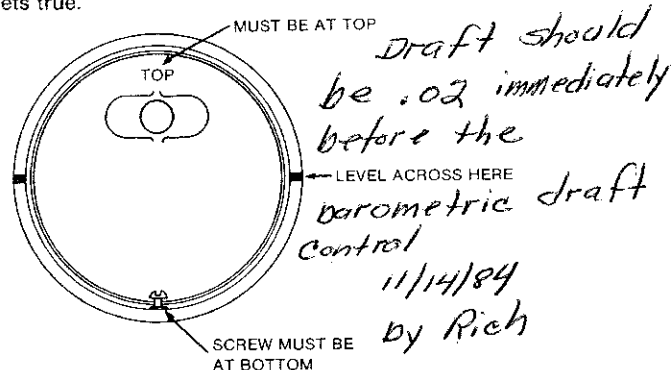
The barometric draft control BDC6 (provided) is required in all installations to maintain a steady chimney draft, to prevent overheating and to save fuel.

The barometric draft control should be installed directly above the oval to round adaptor (provided), which should be mounted on the cast iron collar on the stove.

In case the ring and gate on the draft control are detached from the tee when shipped, be sure to insert the small screw and nut in and through the recess at the bottom of the ring. The nut should be on the outside of the ring (in the recess) with the head of the screw projecting inside the ring as shown below. After the ring is placed in the tee, the screw should be tightened to hold the ring securely.

The draft control is set to maintain the particular draft recommended by LOCKE STOVE COMPANY and is intended for a vertical installation as you receive it. Therefore, see that the control stands plumb, with the word "TOP" (stamped on the gate) at the exact top position. Follow instructions below for leveling.

LEVELLING: Use a carpenter's spirit level to be sure the control does not lean forward or backward. Also place the level across the front, in line with the "V" notches in the ring and check to see if the control sets true.



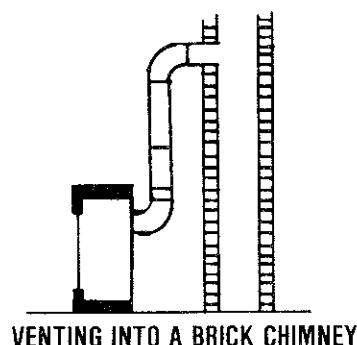
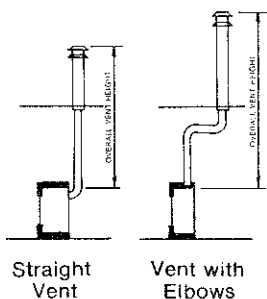
For further information on using your heater safely, obtain a copy of the National Fire Protection Association publication "Using Coal and Wood Stoves Safely" NFPA No. HS-8-1974. The address of the NFPA is 470 Atlantic Ave., Boston, MA 02210.

VARIOUS TYPES OF INSTALLATIONS

CEILING INSTALLATIONS

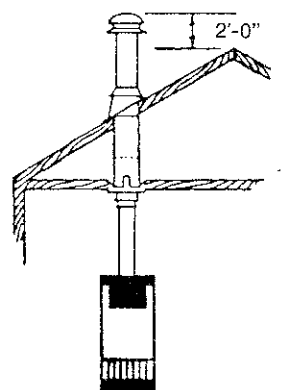
If you use several elbows, your chimney must be higher or larger. Overall Vent Height for 6" Chimney:

Straight Vent	Vent with Elbows
10 Feet Or More	15 feet or more

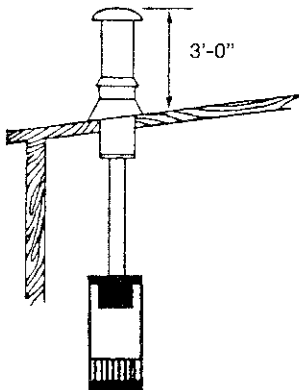


VARIOUS ROOF REQUIREMENTS

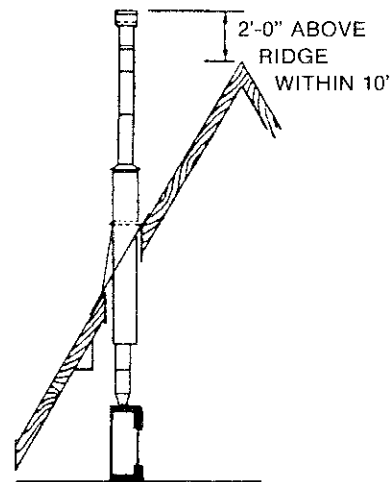
A chimney must terminate at least three feet above the point where it extends through the roof and two feet above any portion of the house within ten feet.



RIDGE ROOF WITH ATTIC



FLAT OR GENTLY SLOPED ROOF



A-FRAME

NOTE: THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND
YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

LIMITED WARRANTY

WARM MORNING COAL HEATER

Locke Stove Company warrants to the original purchaser(s) of each new WARM MORNING Coal Heater that all parts of the heater will be free of defects in workmanship and materials in accordance with the terms specified below, provided that the unit is installed and operated in accordance with the printed instructions furnished with each heater.

PARTS TO BE COVERED	TIME LIMIT OF COVERAGE	WHAT IS COVERED
All Parts except Firebrick Lining, Porcelain Enamel Finish and Cast Iron Grates	1 Year from Purchase Date	Defective Workmanship or Materials

This Warranty specifically covers WARM MORNING Coal Heaters under normal conditions and usage by single families. This Warranty **DOES NOT** cover inoperation of the heater due to damage by accident, alteration, misuse, improper installation or operation, fire, flood or acts of nature. Under this Warranty, Locke Stove Company is obligated to replace, F.O.B. factory, **parts only** which are found to be defective within the warranty period.

PARTS NOT COVERED	REASON NOT COVERED
Firebrick Lining not covered	Firebrick Lining may be cracked or knocked loose by poking with hard objects, or by striking it with a steel poker; therefore, the Firebrick Lining is NOT warranted against such damage.
Cast Iron Grates not covered	Cast Iron Grates may be warped or damaged by overfiring, especially when the heater is new; therefore, the grates are NOT warranted against such damage.
Porcelain Enamel Finish not covered	Porcelain Enamel Finish on cabinet of Model 400 may be chipped by striking it with a hard object or damaged by splashing water on it while hot; therefore, Porcelain Finish is NOT warranted against such damage.

REPLACEMENT OF PARTS ONLY

If any part of your WARM MORNING Coal Heater appears to be defective during the warranty period, consult the dealer from whom the heater was purchased. If he does not have the replacement part in stock he will order it from the factory. **Labor and/or service charges are not covered** under this Limited Warranty. If for any reason your dealer is unable to handle the warranty service or replacement, write to Service Department, LOCKE STOVE COMPANY, 114 West 11th Street, Kansas City, Missouri 64105, and include in your letter the following information:

1. Model number and serial number of your heater
2. Description of operating problem and part that appears defective
3. Name and address of dealer from whom purchased
4. Date heater was delivered by the dealer

Do not, **under any circumstances**, return a defective part to Locke Stove Company without written authorization. In some cases return of the defective part will not be necessary.

LOCKE STOVE COMPANY
114 West 11th St. • Kansas City, MO 64105
(General Offices)

800-821-7877