

Owners Manual

COAL BURNING HEATER
MODEL NUMBER 1807

USE OF WOOD IN
THIS STOVE, EX-
CEPT FOR COAL
IGNITION PUR-
POSES IS PRO-
HIBITED BY LAW.

CAUTION:
Read All Instructions
Carefully Before Star-
ting the Installation of
Operating the Heater.
Improper Installation
May Void Your
Warranty.

- Assembly
- Installation
- Operation
- Repair Parts



DO NOT USE THIS HEATER
IN A MOBILE HOME OR TRAILER

Save This Manual For Future Reference.

UNITED STATES STOVE COMPANY

3500 N. Hawthorne St. • P.O. Box 5349
Chattanooga, Tennessee 37406
(615) 698-3435

tools and materials needed

TOOLS

Pencil
6 Foot Folding Rule or Tape
Tin Snips
Drill, Hand or Electric
Drill Bit (For Sheet Metal Screws)
1/8" Diameter
Gloves
Screwdriver (Blade-Type)
5/16" Nut Driver or
5/16" Socket w/Ratchet

MATERIALS

Chimney Connector - 6" diameter Black or Blued Steel
(24 gauge minimum); Straight or Elbow (as required)
6" Inside diameter Underwriters Laboratories (UL) Listed
Residential Type and Building Heating Appliance
Chimney or existing masonry chimney.
Floor Protector Material as specified on Page 4.
Furnace Cement (Manufacturer Recommends:
Rutland Black Code 78 or Equivalent)

rules for safe installation and operation

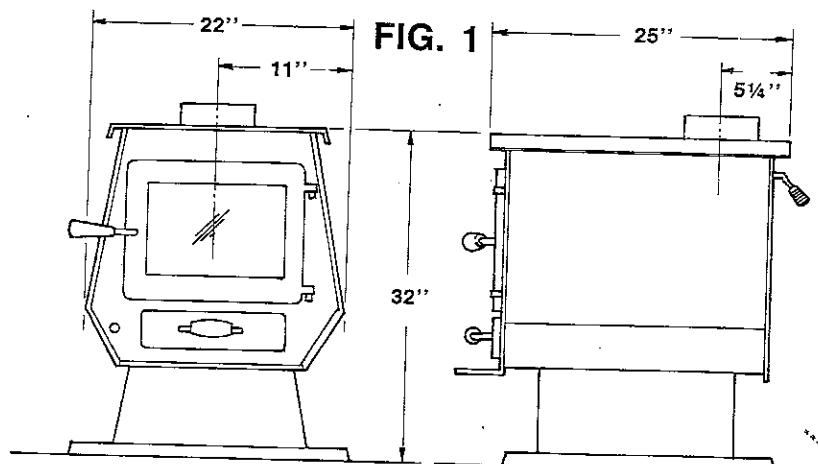
Read these rules and the instructions carefully.

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

1. Check your local codes. The installation must comply with their rulings.
2. Do not install this heater in a mobile home or trailer.
3. Always connect this heater to a chimney and vent to the outside. Never vent to another room or inside a building.
4. Do not connect a coal burning heater to an aluminum Type B gas vent. This is not safe and is prohibited by the National Fire Protection Association Code. This heater requires a masonry or a UL Listed Residential Type and Building Heating Appliance Chimney. Use a 6" diameter Chimney or larger, that is high enough to give a good draft.
5. Be sure that your Chimney is safely constructed and in good repair. Have the chimney inspected by the Fire Department or a qualified inspector. Your insurance company may be able to recommend a qualified inspector.
6. Inspect chimney connector and chimney twice monthly during the heating season for any deposit of creosote or soot which must be removed (see Chimney Maintenance, page 14).
7. Provide air for combustion from outside the house into the room where the heater is located. If the intake is not in the same room, air must have free access to the room.
8. **CAST IRON PARTS MUST BE "SEASONED" TO AVOID CRACKING. BUILD ONLY SMALL FIRES ON FIRST 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 further information on using your heater safely, obtain a copy of the National Fire Protection Association (NFPA) publication "Using Coal and Wood Stoves Safely" NFPA No. HS-10-1978. The address of the NFPA is Batterymarch Park, MA 02269.
11. Keep the ashpit section free of excess ashes. Do not allow ashes to stack higher than the sides of the ash pan.
12. **DISPOSAL OF ASHES** — Ashes should be placed in a metal container with a tight fitting lid. Keep the closed container on a noncombustible floor or on the ground, well away from all combustible materials. Keep the ashes in the closed container until all cinders have thoroughly cooled. The ashes may be buried in the ground or picked up by a refuse collector.
13. **CAUTION** — The special paints used on your heater may give off some smoke while they are curing during first few fires. Build small fires at first. 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.
14. **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 OVERFIRED. FOLLOW OPERATING INSTRUCTIONS CAREFULLY.**
15. Keep the feed door and ash door closed at all times except while tending the heater.
16. Use coal only. DO NOT USE the coal bricks that are manufactured from coal dust and a wax-type binder.

CAUTION:
Do not touch the heater until it has cooled.

Heater Dimensions

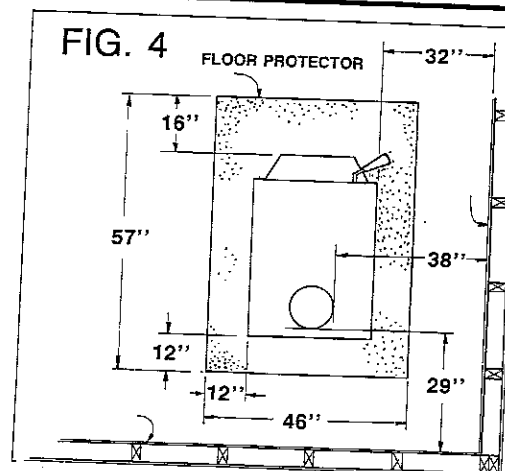
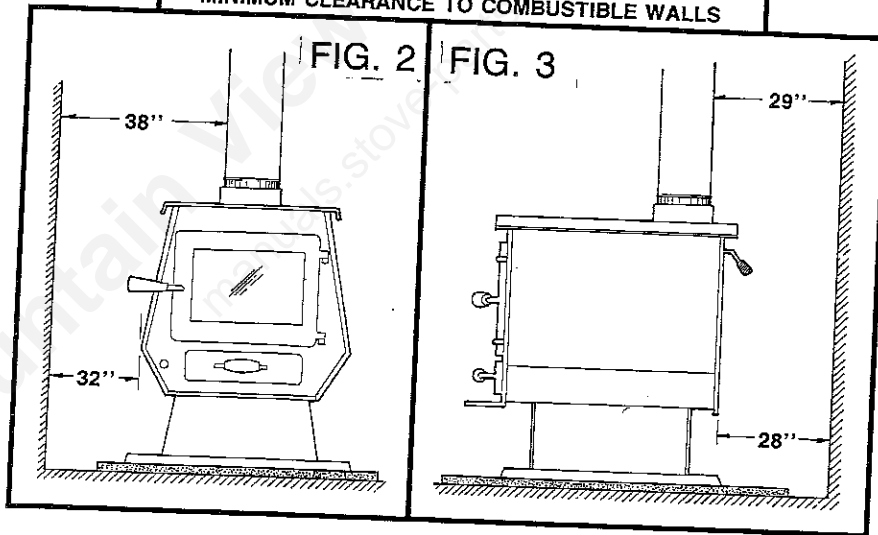


Locating the heater

AS A LOCATION IS SELECTED, KEEP THE FOLLOWING IN MIND:

1. The chimney connection should be as short as possible. The heater must have its own chimney. Do not connect this unit to a chimney flue serving another appliance. If there is no chimney near where you wish to place the heater, you can use a UL Listed Residential Type and Building Heating Appliance Chimney (Fig. 6).
2. Place the heater on solid masonry or solid concrete. When the heater is used on a combustible floor, use a non-combustible floor protector of one layer of $\frac{3}{8}$ " millboard having a thermal conductivity of $K=0.84$ BTU in./ft.² hr. deg. F with 28-gauge sheet metal or a UL Listed Floor protector. Have the floor protector extend 16" beyond the door side of the heater and under the connector pipe in the back (Fig. 2, 3, and 4).
3. Check Figures 2, 3, and 4. Be sure you have the clearances shown from the heater and the connector pipe to combustible surfaces. If you have a solid brick or stone wall behind your heater, you can place the heater as close as you wish to the wall. If the wall is only faced with brick or stone, treat it as a combustible wall.

MINIMUM CLEARANCE TO COMBUSTIBLE WALLS



CAUTION
Keep furnishings and other combustible materials away from the heater.

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 Page 3 item 5.

Look at Fig. 5. The connector pipe and fittings you will need to connect directly to a masonry chimney are shown.

If the 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 N.F.P.A. 211.

Do not connect this heater into the same chimney flue as the fireplace or flue from another heater.

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.

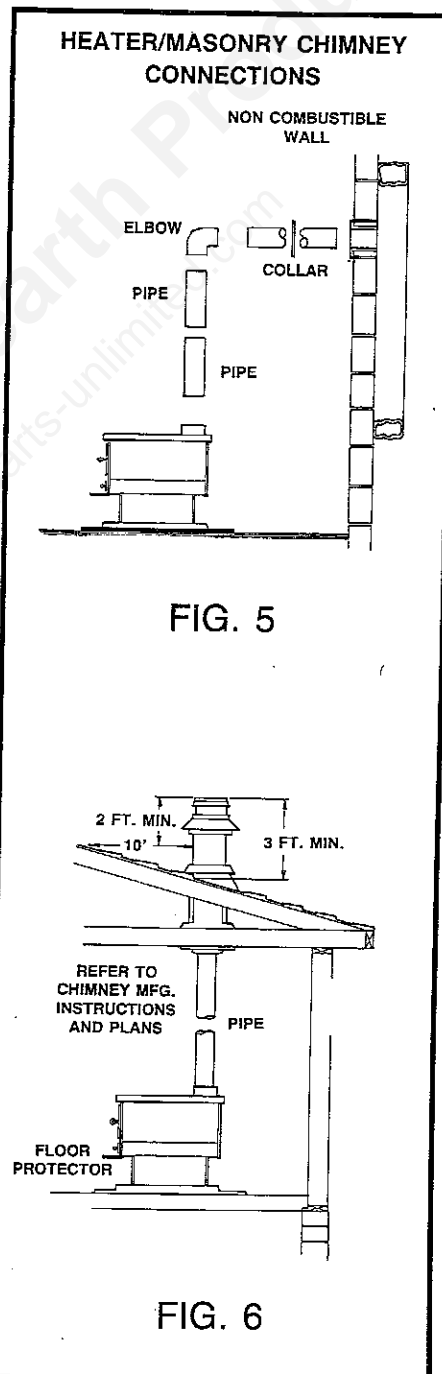
UL LISTED CHIMNEY

Carefully follow chimney manufacturer's instructions. Use only a UL Listed Residential Type and Building Heating Appliance Chimney. If your chimney starts at the ceiling (Fig. 6), you will need a 6" elbow and enough 6" pipe to reach the ceiling.

The top of the chimney must be at least 3 feet above the roof and be at least 2 feet higher than any point of the roof within 10 feet (Fig. 6).

BAROMETRIC DRAFT REGULATOR (Optional)

In some installations it may be desirable to install a barometric draft regulator in the chimney connector. A barometric draft regulator should be located in the same room (pressure zone) as the heater. When installing a barometric draft regulator, follow the manufacturer's instructions.



venting into a fireplace

Many people may wish to convert an existing fireplace to coal heater use. Usually, safe connection of stovepipe to a masonry chimney requires more effort than connection to a prefabricated chimney. There are two methods (Type A and Type B) to accomplish this. No matter which method you choose, the fireplace must be tightly closed and sealed at the damper in the flue. Good sealants are high-temperature caulking, ceramic wool, and furnace cement. Always remember to inspect the masonry chimney and fireplace. If necessary, clean the flue and smoke shelf before beginning your installation. Install the heater into the fireplace so that the system can be dismantled for cleaning and inspection.

Before deciding to convert your fireplace, keep in mind that some fireplaces and existing chimneys are unsafe. They must be structurally sound, and the flue liner must be in good condition. Clearances to combustibles are explained in the previous section on masonry chimneys. If you have any question regarding the condition of the chimney, consult a qualified engineer, competent mason, or knowledgeable inspector.

Many prefabricated fireplaces fall into the "zero-clearance fireplace" category. This is a factory-built metal fireplace with

multilayered construction. It is designed to provide enough insulation and/or air cooling so that the base, back, and sides can be safely placed in direct contact with combustible floors and walls. Although many prefabricated fireplaces have been tested by nationally recognized organizations for use as fireplaces, they have not been tested to accept airtight heaters. In fact, their use as such may void the manufacturer's warranty.

Steel-lined fireplaces, on the other hand, can be used with airtight heaters. These units use a ½ inch firebox liner and an air chamber in connection with 8 inches of masonry to meet code. They contain all the essential parts of a fireplace; firebox; damper, throat, smoke shelf, and smoke chamber. Many of them look exactly like a masonry fireplace and must be checked closely for above requirements before installing a heater into them.

Another method frequently used by some people is to vent the heater directly into the fireplace. This does not meet code since the heater is being vented into another appliance — the fireplace. This method should not be attempted because combustion products will deposit and build up in the firebox or fireplace. Be certain not to install a hazard in your house.

CAUTION

**NOT ALL FIREPLACES ARE SUITABLE FOR INSTALLATION
OF A COAL BURNING HEATER.**

rules for connector pipe installation

1. The crimped end of the stovepipe fits inside the heater flue collar. Install additional pipe and elbow with the **CRIMPED END TOWARD THE HEATER**. This will allow any condensation in the flue to run back into the heater.
2. Slope any horizontal pipe upward toward the chimney at least $\frac{1}{4}$ inch for each foot of horizontal run.
3. You must have at least 18 inches of clearance between any horizontal piping and the ceiling.
4. The pipe cannot extend into the chimney flue (Fig. 7).
5. Seal each connector pipe joint with furnace cement. Also seal the pipe at the chimney.
6. Use 3 sheet metal screws at each joint to make the piping rigid.
7. It is recommended that no more than two 90° bends be used in the stove pipe installation, as more than two may decrease the amount of draw and possibly cause more smoke spillage.

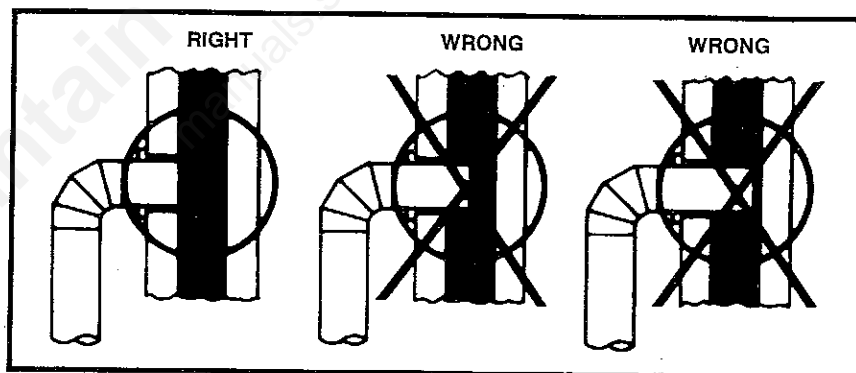


FIG. 7

operating instructions for 1807

COAL BURNING HEATER

FUEL

Egg size Bituminous coal for residential furnaces, or any of the specially packaged fireplace coals can be used. Coal with a low ash content (2% to 6%) is recommended.

NOTE: Store coal in a dry, well-ventilated area.

LIGHTING

1. Set air slide on door and air wash slide to 'Open' position for maximum draft (see Fig. 8).
2. Open bypass by turning level at rear of heater as shown (Fig. 8).
3. Open feed door and place paper and kindling on grate for starting the fire.
4. Light paper and kindling and close feed door.
5. Add about 15 lbs. of coal after fire is burning well. Be careful not to smother out the kindling fire.
6. Set air slide on door to a mid point setting, while leaving the air wash slide at full open position. Close bypass after coal has ignited.

ADDING FUEL

When starting a fire, add small amounts of fuel each hour or so, instead of large amounts every 8 to 10 hours. This will improve combustion and will cause less build up of tars and soot in the chimney.

1. Set air slides to full open position, and open bypass before opening feed door.
2. Coal Fire: Never smother the fire when adding coal (see caution below). Gas accumulation and a mild smoky explosion could occur.
 - a. Add fresh kindling if the bed of coals has cooled.
 - b. Add up to 15 lbs. of coal. Do not add coal above bottom of feed door opening.
 - c. Stir the coals and watch the fire. Be sure the new coal is burning before the feed door is closed.
 - d. Shake grate vigorously to spill ashes into the ash pan. Do this at least once every 12 hours of operation. Empty ash pan regularly. Do not allow ashes to build up to grate level. This will cause premature grate failure, warpage and burnout. Dispose of hot ashes properly (see Note 12 on page 3).

MINIMUM FIRE

The burn rate at the low setting of the air slide in the door can be further adjusted by pushing in the air wash control slide. This however reduces the amount of air across the glass and over a long period of time will cause the glass to soot over.

CAUTION

DO NOT OPERATE THIS HEATER WITH FEED OR ASH DOOR OPEN. OPERATION WITH EITHER DOOR OPEN WILL OVERHEAT AND DAMAGE THE HEATER.

WARNING

NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL, LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THE HEATER.

WARNING

NEVER STORE FLAMMABLE LIQUIDS, ESPECIALLY GASOLINE, IN THE VICINITY OF THE HEATER.

CAUTION

GASES THAT ARE DRIVEN FROM FRESH COAL MUST BE BURNED OR THEY WILL ACCUMULATE AND EXPLODE. NEVER SMOTHER A FIRE WHEN ADDING FRESH COAL.

CAUTION

BUILD A FIRE ON INTEGRAL GRATE THAT IS PROVIDED WITH THE HEATER.

CAUTION

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

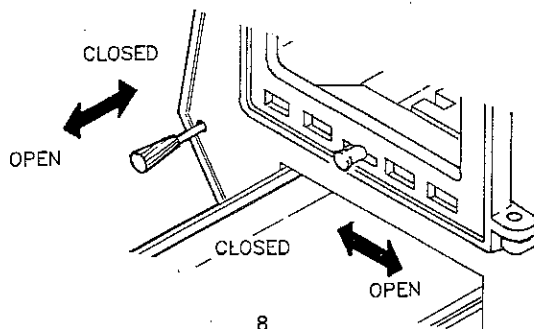


FIG. 8

FOR MODEL 1807 COAL HEATER

suggestions for burning anthracite coal

1. Anthracite coal may be burned in the Model 1807 Coal Heater. Always follow instructions that are shown in the Owners Manual.
2. With coal, as with wood, it is important to maintain a clean chimney. The chimney connector and chimney should be inspected at least twice monthly during heating season.
3. Keep the grate clear of ash and cinders. Use the shaker grate to keep the ashes from building up in the firebox.
4. Do not operate the unit with the ash door, feed door, or cabinet door open.
5. Anthracite coal burns with a short, blue flame with the coals having a glowing, red color. Before adding coal, when starting the fire, have a good hot log fire burning.
6. After having a log fire burning, add small amounts of coal until a bed of coals is built up.
7. A draft reading of $-.05$ to $-.06$ in w.c. is required for anthracite to burn.

minimum fire

The burning rate at the low setting can be further adjusted by opening or closing the minimum fire air shutter on the draft damper door.

1. Partially close the shutter to make the fuel burn longer.
2. Open the shutter, exposing a large opening, to reduce the formation of creosote or soot (see notes on Chimney Maintenance).
3. Do not operate the heater with the minimum fire air shutter completely closed.

service hints

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

1. The connector pipe may be pushed into the chimney too far, stopping the draft (Fig. 7).
2. Do not connect two heaters into the same chimney flue.
3. 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, it must be closed tightly.
4. If the chimney is too cool, water will condense in the chimney and run back into the stove. Creosote formation will be rapid and may block the chimney. Operate the heater at a high enough fire to keep the chimney warm, preventing this condensation.
5. 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 a 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 3 feet above the roof and be at least 2 feet higher than any point of the roof within 10 feet.

chimney maintenance

Creosote and Soot — Formation and Need for Removal

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. Failure to remove creosote or soot may cause a house fire. Creosote may be removed by using a chimney brush or other available materials.

Chimney fires burn very hot. If the chimney connector should glow red, immediately call the fire department, then reduce the fire by closing the inlet air control and pour a large quantity of coarse salt, baking soda or cool ashes on top of the fire in the firebox.

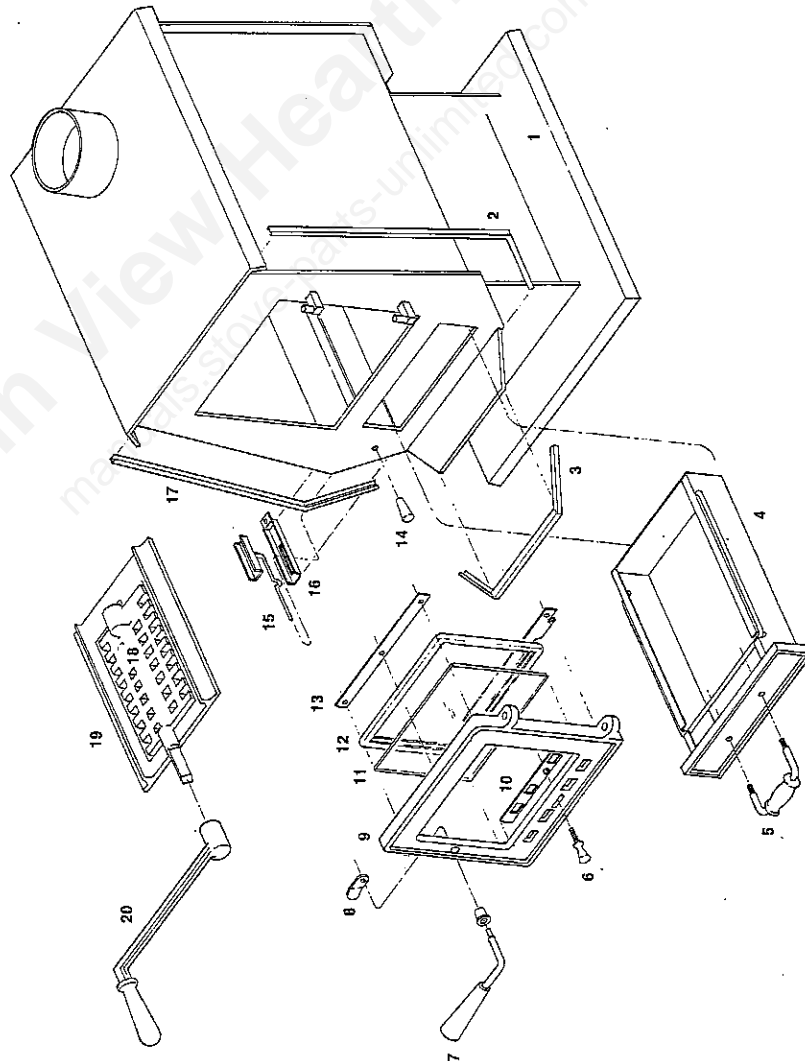
CAUTION:

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.

Repair Parts

AUTOMATIC COAL BURNING
CIRCULATOR HEATER

MODEL NUMBER 1807



Repair Parts

AUTOMATIC COAL BURNING CIRCULATOR HEATER

Model Number 1807

Item No.	Part No.	Description
1	68482	Firebox Weldment
2	89446	Brass Trim R/H Side
3	89447	Hearth Trim
4	68489	Ash Pan Assembly
5	89379	Ash Pan Handle
*	22723	Ash Pan Bail Handle
6	40022	Draft Control Knob
7	89354	Feed Door Handle
8	22148	Door Latch
*	83145	3/8" Flat Washer
*	83274	3/8" Lock Nut
9	68483	Feed Door
10	23190	Draft Slide Panel
11	89155	8 x 10 Glass
12	88047	Gasket (3 Feet Required)
*	88057	1/2" Thermocord (51" Required)
13	22378	Glass Retainer/Spark Deflector (2 Required)
14	89455	Wood Handle
15	86435	Draft Slide Stem
16	23189	Draft Slide Housing
17	89464	Brass Trim L/H Side
18	40257	Shaker Grate
19	40256	Shaker Frame
20	40260	Shaker Handle
*	85710	Owner's Manual
*	86437	Bypass Rod
*	89365	Bypass Spring Handle

*Not Shown

Owner's Manual

HOW TO ORDER REPAIR PARTS AND OPTIONS

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 INSIDE OF THE CABINET DOOR 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: 1807
4. The SERIAL NUMBER: _____

BEFORE INSTALLING YOUR HEATER, CHECK THE APPROPRIATE BOX AND FILL IN THE SERIAL NUMBER OF YOUR HEATER IN THE SPACES PROVIDED ABOVE.

UNITED STATES STOVE COMPANY

P.O. BOX 5349
CHATTANOOGA, TENNESSEE 37406
(615) 698-3435