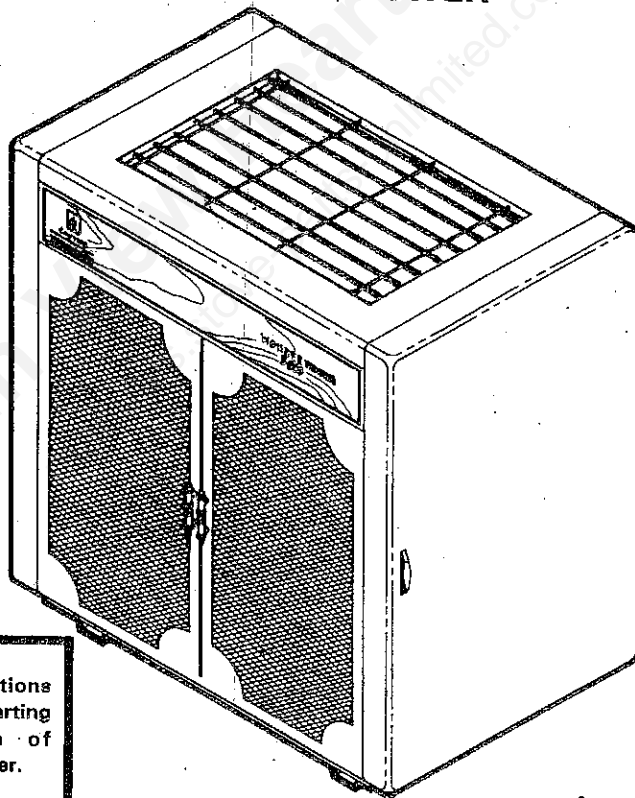


Owners Manual

Model 5021 / Model 5027
Wonder Wood / Wonder Coal

**AUTOMATIC WOOD BURNING —
AUTOMATIC WOOD/COAL BURNING
CIRCULATOR HEATER**



CAUTION:
Read All Instructions
Carefully Before Starting
the Installation of
Operating the Heater.

Improper Installation
May Void Your
Warranty.

Save This Manual
For Future Reference.



- Assembly
- Installation
- Operation
- Repair Parts

**DO NOT USE THIS HEATER
IN A MOBILE HOME OR TRAILER**



UNITED STATES STOVE COMPANY

3600 N. Hawthorne St., Chattanooga, Tennessee 37406

FORM 85425C 4/87


CONGRATULATIONS!

You've purchased one of America's Finest Wood and Coal 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.



LIMITED WARRANTY

WARRANTY: The United States Stove Company warranties its solid fuel heaters against burn-out or cracking of any steel or cast iron parts.

TIME PERIOD: The warranty period extends 3 years from date of purchase by original owner, except on electrical components of blower for which the warranty period is one year.

CLAIM PROCEDURE: Any defects relating to the above should be reported to United States Stove Company, giving description and pertinent data. Include proof of purchase, which will be returned on request.

OUR RESPONSE: Providing the heater has been installed and used in accordance with the owners manual supplied with the heater, The United States Stove Company will either:

- (1) Replace the defective part free of charge, including payment of any labor charges, or
- (2) Replace the heater free of charge, including payment of any labor charges.

NOT COVERED: Smoking problems are not covered under this warranty. Inadequate draft is generally due to the design or installation of the flue system.

WARRANTOR: United States Stove Company, Box 5349, Chattanooga, Tennessee 37406

NOTE: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

85363

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" Dia.
Gloves
Screwdriver (Blade-Type)
5/16" Nut Driver or
5/16" Socket w/Ratchet

MATERIALS

Chimney Connector-6" dia. Black or Blued Steel (24 ga. minimum): Straight or Elbow (as required)
1/2" Sheet metal screws
6" Inside diameter Underwriters Laboratories (UL) Listed Residential Type and Building Heating Appliance Chimney or existing masonry chimney.
Floor Protector Material 3'-0" x 4'-6" as specified on Page 4.
Furnace Cement (Manufacturer Recommends: Rutland Black Code 78 or Equivalent)

rules for safe installation and operation

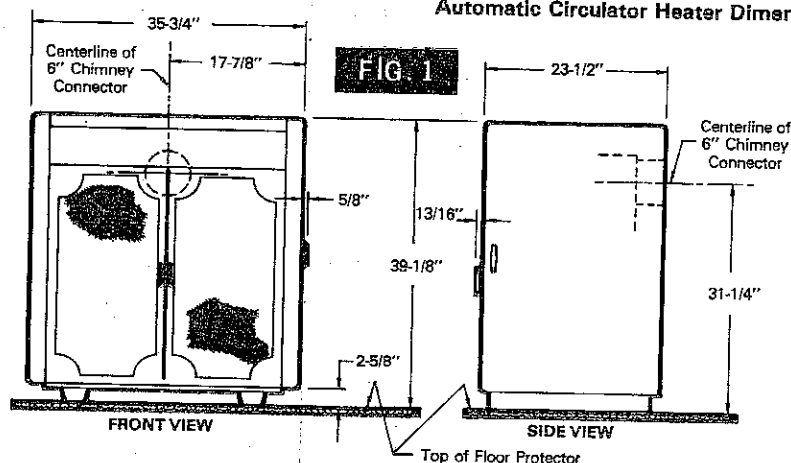
Read these rules and the instructions carefully.

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 wood 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, ash door, cabinet door closed at all times except while tending the heater.
16. Use wood or 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.

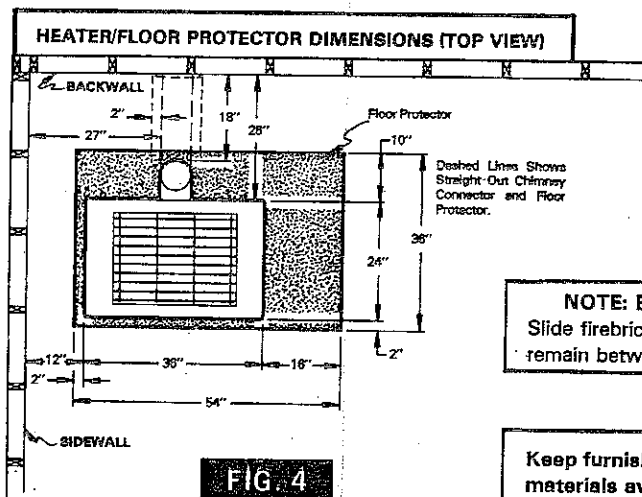
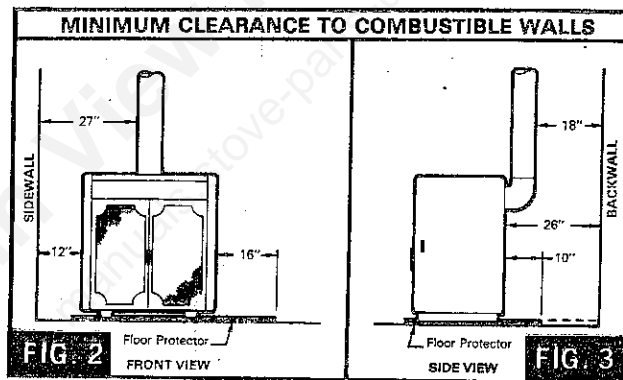
Automatic Circulator Heater Dimensions



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 two layers of 3/8" millboard having a thermal conductivity of $K=0.84$ BTU in./ft.² hr. deg. F with 28-gauge sheet metal a U.L. 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.



NOTE: BEFORE FIRING HEATER
Slide firebricks toward the rear so no gaps remain between them.

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 Pg. 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.

HEATER/MASONRY CHIMNEY CONNECTIONS

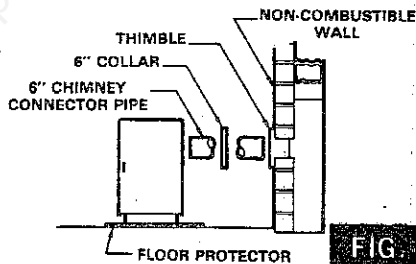
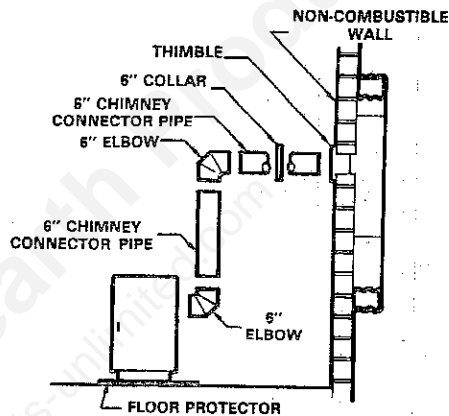


FIG 5

HEATER/U.L. LISTED CHIMNEY CONNECTIONS/CLEARANCES

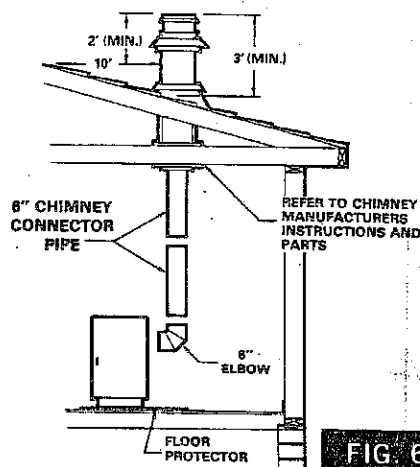


FIG 6

venting into a fireplace

Many people may wish to convert an existing fireplace to wood 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 wood 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.

CAUTION
NOT ALL FIREPLACES ARE SUITABLE
FOR INSTALLATION OF A WOOD
HEATER.

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 wood 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 wood heaters. These units use a 1/4-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 wood heater into them.

Another method frequently used by some people is to vent the wood 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.

Type A Installation

Connection of the stovepipe directly into the existing masonry chimney over the fireplace opening is the most desirable method. This installation performs better, yielding more heat and better draft; it is also easy to clean and inspect for creosote. Before beginning this type of installation plan carefully; a high degree of skill is required to insure safety.

An entry port for the stovepipe must be cut through the chimney with minimum damage to the fireclay liner. Some involved measurements may be required to locate the flue liner exactly. Before cutting, take time to mark the size and position of the entry port. Position the entry port so that at least 8 inches of the flue liner remain below the port.

Keep in mind that wood mantels and combustible trim around the fireplace must have adequate clearances from the heater and stovepipe or must be protected in an approved manner. Also, be sure to leave at least an 18-inch clearance

between the top of the stovepipe and the combustible ceiling or other combustibles. Placing the center of the entry port 2 feet below the ceiling will insure proper clearance for 6-inch, 8-inch, and 10-inch stovepipes.

Next, install a fireclay (at least 5/8 inch thick) or metal thimble, being sure that the thimble is flush with the inner flue lining; secure the thimble in place with refractory mortar. The thimble should be surrounded on all sides with 8 inches of brickwork (solid masonry units) or 24 inches of stone.

Install the stovepipe as far as possible into the thimble, but not past the inside of the flue lining. There should be a small airspace (approximately 1/2 inch) between the stovepipe and thimble, allowing for expansion of the stovepipe. Seal this airspace with high-temperature caulking or ceramic wool. Finally, be sure to wire the damper closed and apply the same sealant you used at the stovepipe and thimble junction.

TYPE A FIREPLACE CONVERSION

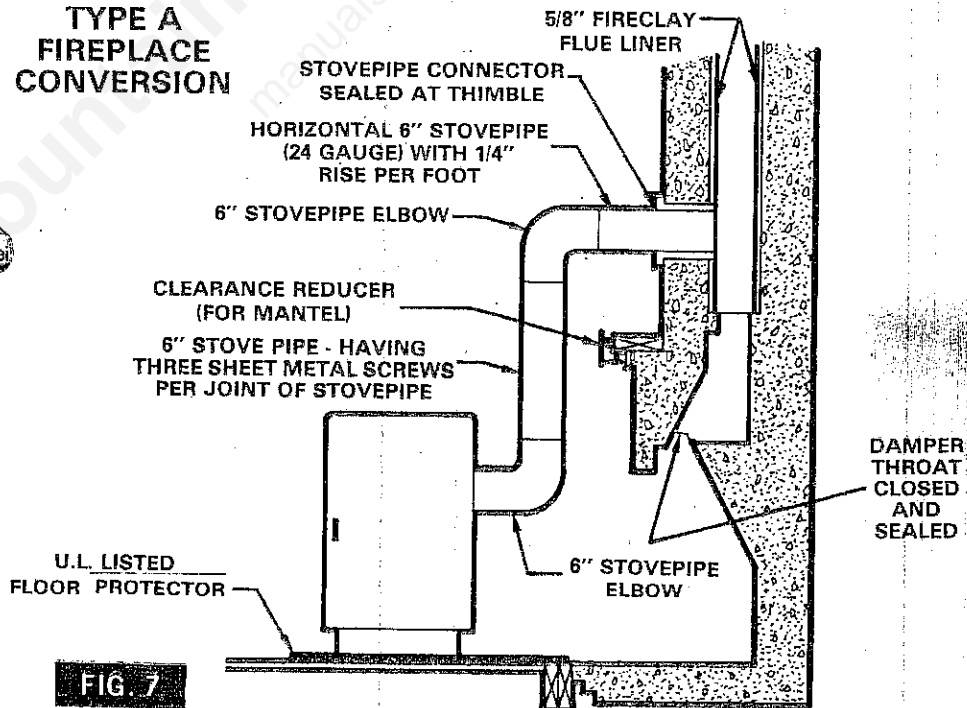


FIG 7

Type B Installation

The next method, Type B, is acceptable but is more difficult to operate and maintain than Type A. Remove the damper and cut a piece of 24 gauge sheet metal to rest on the damper frame. Cut a hole in the sheet metal to accept the stovepipe. Insert the stovepipe as far as possible into the flue past the throat or damper plate. (If the end of the stovepipe which protrudes past the damper is cut at an appropriate angle, resistance to passage of flue gases can be minimized.)

Finally, fasten all junctions between the sheet metal and damper frame and between the sheet metal and stovepipe. For an airtight system, be sure to seal these junctions with high-temperature caulking, ceramic wool, or furnace cement. Instead of a sheet metal closure at the damper, a prefabricated flue adapter of 12 gauge, low-carbon steel or stainless steel may be sealed into place to accept the stovepipe. Be sure to fasten and seal the stovepipe to the flue adapter.

TYPE B FIREPLACE CONVERSION

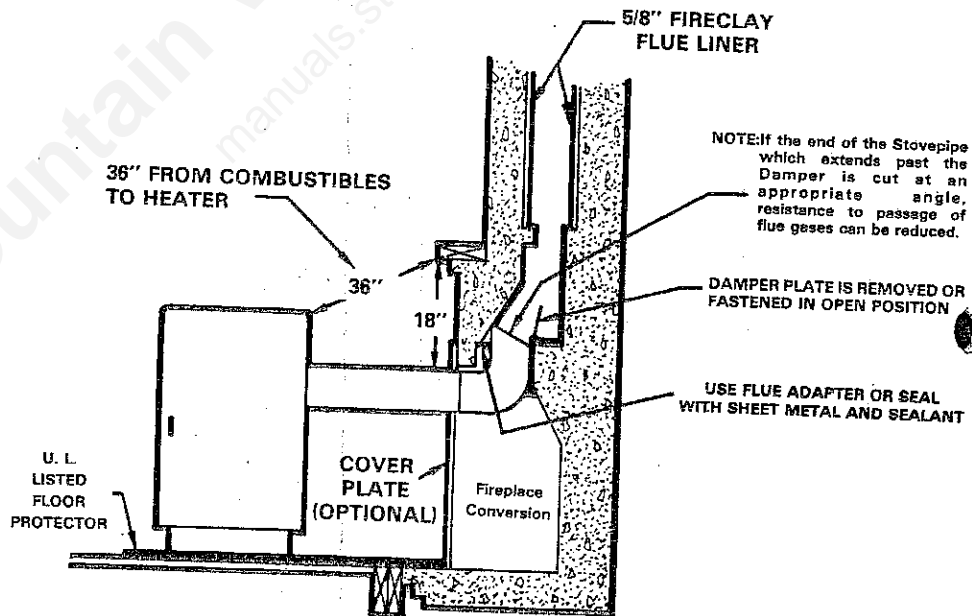


FIG. 8

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. 9).
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. Do not put a damper in a connector pipe.
8. 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.

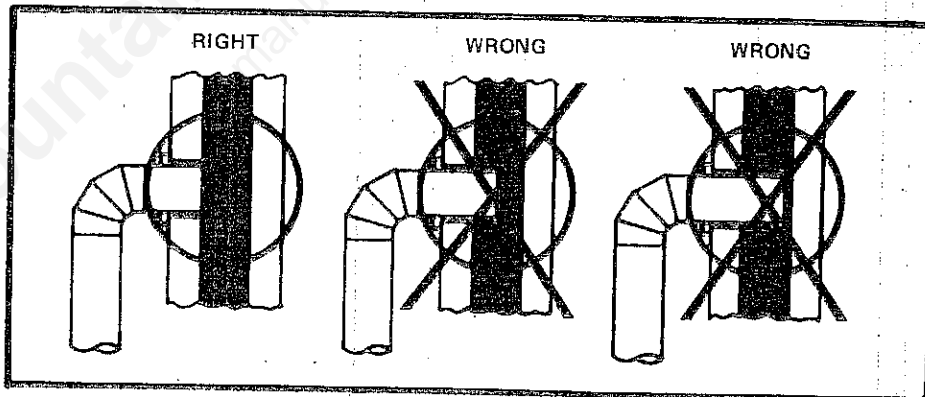


FIG. 9

operating instructions for 5021

WOOD BURNING CIRCULATOR HEATER ONLY!

FUEL

Hardwood 18" to 24" should be split and air dried (seasoned) for 6 months to obtain maximum burning efficiency.

Use wood materials only. Do not use coal.

Coal or charcoal will destroy the Grates or Fire Box.

LIGHTING

1. Set the thermostat on "HIGH" for maximum draft.
2. Open the feed door and place paper and kindling on the grate for starting the fire.
3. Light fire and close feed door.
4. Add wood after fire is burning briskly. Be careful not to smother the kindling fire.
5. Set thermostat to maintain desired temperature. "MEDIUM" setting is normally satisfactory. Set higher or lower for your comfort.

ADDING WOOD

When possible, add small amounts of wood each hour or so instead of adding large quantities of fresh fuel over long periods of time. This will give more complete combustion and less build-up of tars or soot in the chimney.

1. Set thermostat to HIGH before opening feed door.
2. Empty ash pan regularly. Do not allow ashes to build up to grate as grate will warp and burnout, and you might spill the ashes when removing the pan. Dispose of hot ashes properly (see Note 12 on Page 3).

CAUTION

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

CAUTION

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

CAUTION

DO NOT OPERATE THE HEATER WITH THE MINIMUM FIRE AIR SHUTTER COMPLETELY CLOSED.

CAUTION

DO NOT OPERATE WITH FEED, ASH, OR CABINET DOOR OPEN. THIS HEATER IS DESIGNED FOR THERMOSTATIC OPERATION. OPERATION WITH ANY OF THESE DOORS OPEN WILL OVERHEAT AND DAMAGE THE HEATER.

CAUTION

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

CAUTION

KEEP ALL FLAMMABLE LIQUIDS, ESPECIALLY GASOLINE, FROM THE VICINITY OF THE HEATER WHETHER IN USE OR IN STORAGE.

operating instructions for 5027

WOOD/COAL BURNING CIRCULATOR HEATER ONLY!

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.

Hardwood, 18" to 24" should be split and air dried (seasoned) for 6 months.

LIGHTING

1. Set the thermostat on "HIGH" for maximum draft.
2. Open the feed door and place paper and kindling on the grate for starting the fire.
3. Light fire and close feed door.
4. Add wood or about 15 lbs. of coal after fire is burning briskly. Use care not to smother the kindling fire.
5. Set thermostat for desired temperature. "MEDIUM" setting is normally satisfactory. Set higher or lower for your comfort.

ADDING FUEL

When possible, add small amounts of fuel each hour or so instead of large amounts every 8 to 10 hours. This will give more complete combustion and less build-up of tars and soot in the chimney.

1. Set thermostat to HIGH before opening feed door.
2. Wood Fire - Do not add fuel above firebox liners.
3. Coal Fire - Never smother the fire when adding coal (see CAUTION below). Gas accumulation and a mild smoky explosion will occur.
 - a. Add fresh kindling if the bed of coals has cooled.
 - b. Add up to 20 lbs. of coal per loading. Never add coal above bottom of feed door opening.
 - c. Stir the coal and watch the fire. Be sure the new coal is burning briskly before you close the doors and turn the thermostat down.
 - d. Shake grates vigorously 1/2" left to right 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 as grate will warp and burnout, and you might spill the ashes when removing the pan. Dispose of hot ashes properly (see Note 12 on Page 3).
 - e. Full Rotation of the handle (4 o'clock to 7 o'clock position) will completely dump ashes and coal into the ash pan. Vigorous rotation of the handle left to right (4 o'clock to 5 o'clock position or 1/2" to 1") will only agitate coals and spill ashes into the ash pan.

- f. It is advisable for you to get familiar with the shaker grate operation before firing your heater.

MINIMUM FIRE

The burning rate at the low setting can be further adjusted by opening or closing the minimum fire air shutter (Fig 10) in the thermostat housing.

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.

CAUTION

DO NOT OPERATE THIS HEATER WITH FEED OR ASH DOOR OPEN. THIS HEATER IS DESIGNED FOR THERMOSTATIC OPERATION. 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 HEATER OR CHIMNEY CONNECTOR GLOWS, YOU ARE OVERFIRING.

adjusting the thermostat

The thermostat control was calibrated at the factory. The operation of the heater may require a change in calibration. Calibration adjustments should be made at room temperature.

The heat output from the heater may be increased by the following:

1. Remove the thermostat housing by removing the (4) machine screws holding the thermostat housing to the firebox.
2. Remove one link from the linkage chain connecting the damper door and thermostat coil.
3. Reassemble the unit.
4. Adjust the thermostat setting and operate unit as per the owner's manual.
5. If more heat is desired, additional links may be removed from the chain.

ADJUSTING THE MINIMUM AIR SHUTTER

(The minimum air shutter has an infinite number of settings. Several adjustments may be necessary for the unit to work most effectively for your particular installation):

1. The minimum air shutter may be adjusted to the closed position in installations where the draft is "above normal," generally, .06 w.c. or above would be considered "above normal."
2. In installations where the draft is "below normal," the minimum air shutter should be adjusted toward the open position.

NOTE: More than one readjustment may be necessary. At room temperature (72° F) and "LOW" setting, the draft damper door should be closed.

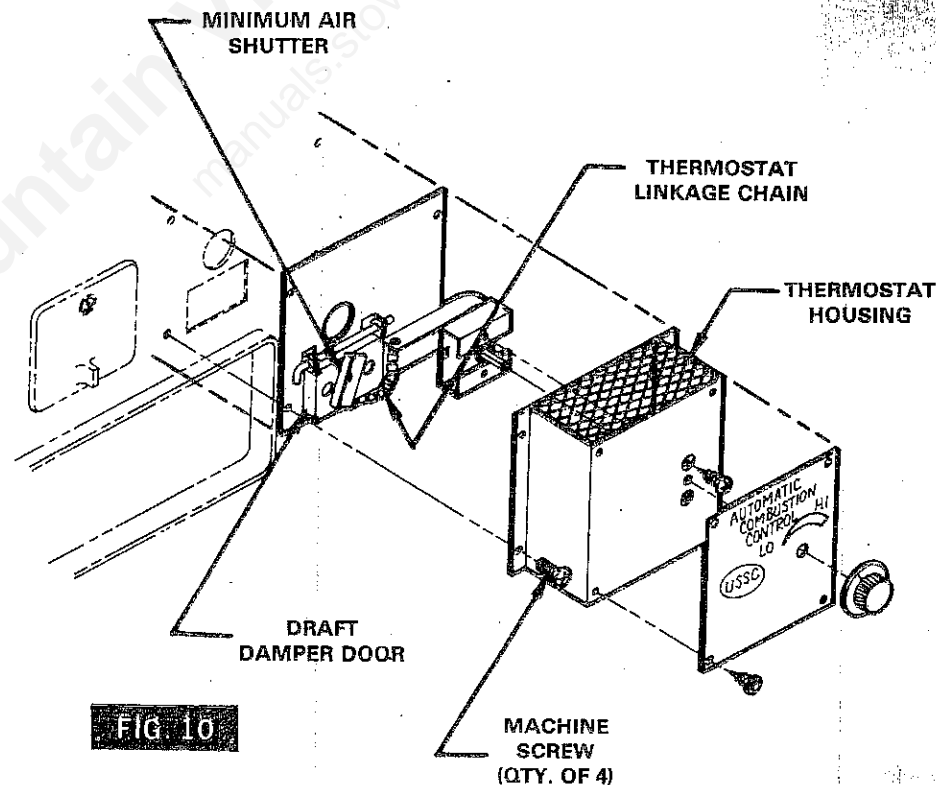


FIG 10

Adjusting Air Shutter on Feed Door

FOR MODEL 5021 WONDERWOOD ONLY!

NOTE
KEEP THIS AIR SHUTTER IN THE
CLOSED POSITION AT ALL TIMES!

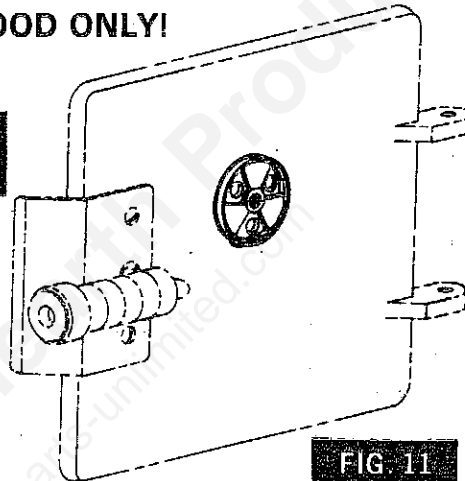


FIG. 11

FOR MODEL 5027 WONDERCOAL ONLY!

SUGGESTIONS FOR BURNING ANTHRACITE COAL

1. Anthracite coal may be burned in the Model 5027 Wonder Coal. 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 or coal is built up.
7. A draft reading of $-.05$ to $-.06$ in w.c. is required for anthracite to burn.

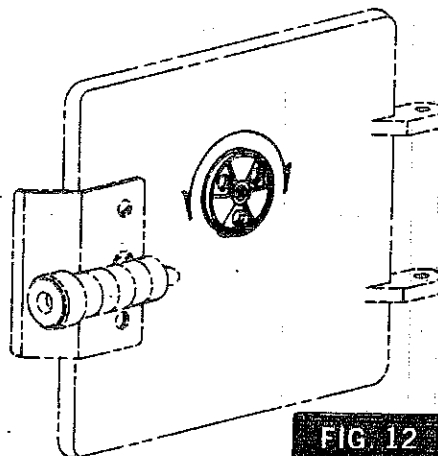


FIG. 12

The draft wheel located on the feed door should be opened when burning coal and closed when burning wood. The draft wheel provides a source of secondary air that is needed when burning coal. Secondary air is needed because when coal burns, it gives off large quantities of volatile gases that need additional air before complete combustion can occur. This draft wheel may be adjusted to give the best performance depending on the particular needs of the user.

NOTE

Adjust air shutter on feed door damper from closed to open position for better burning. This air shutter should be in the open position only when burning coal.

minimum fire

The burning rate at the low setting can be further adjusted by opening or closing the minimum fire air shutter (Fig. 10) on the draft damper door.

1. Partially close the shutter to make the fuel burn longer.

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 heater. Possible causes are:

1. The connector pipe may be pushed into the chimney too far, stopping the draft (Fig. 9).
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

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 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

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.

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 (Fig. 6).

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:

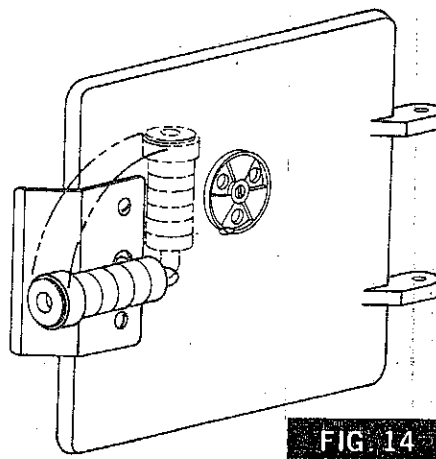
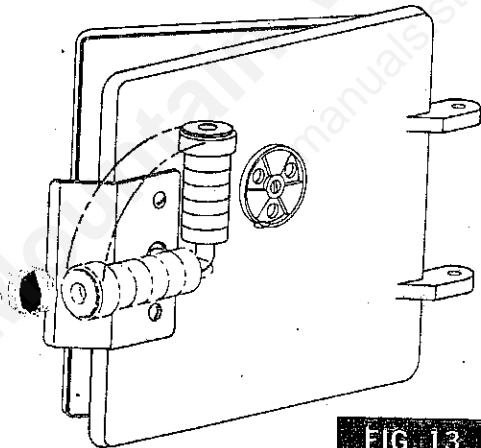
A chimney fire may cause ignition of wall studs or rafters which you thought were a safe distance from the chimney. If you have a chimney fire, have your chimney inspected by a qualified person before using again.

Instructions for

Two-Step Latch Operation

1. Follow these instructions to operate your heater safely when operating the feed door.
2. Turn handle clockwise to the 12 o'clock position, pull the door open until you engage the second step. (Fig. 13).
3. Hold the door in that position for approximately 10 seconds.
4. Then to open door, turn the handle counter clockwise to the 9 o'clock position and then continue to pull the door open. (Fig. 14).
5. To close and latch the door, reverse steps 4 thru 2.

NOTE: THIS NEW LATCHING MECHANISM MEETS CODES AND REGULATIONS AND PROVIDES MORE SAFETY FOR THE USER OF THIS HEATER.

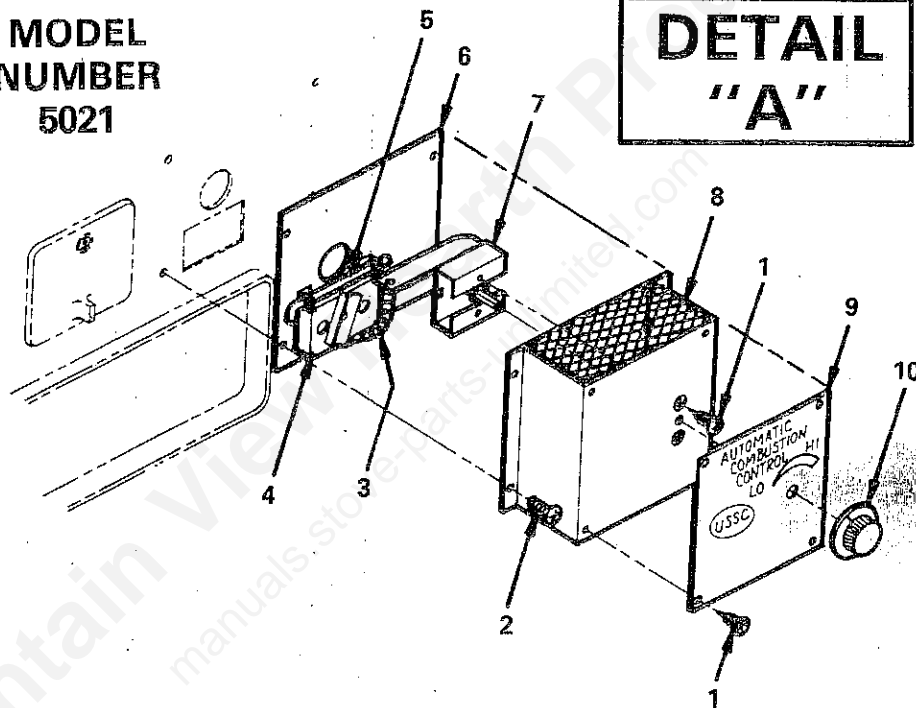


Repair Parts

AUTOMATIC WOOD BURNING CIRCULATOR HEATER

MODEL
NUMBER
5021

**DETAIL
"A"**



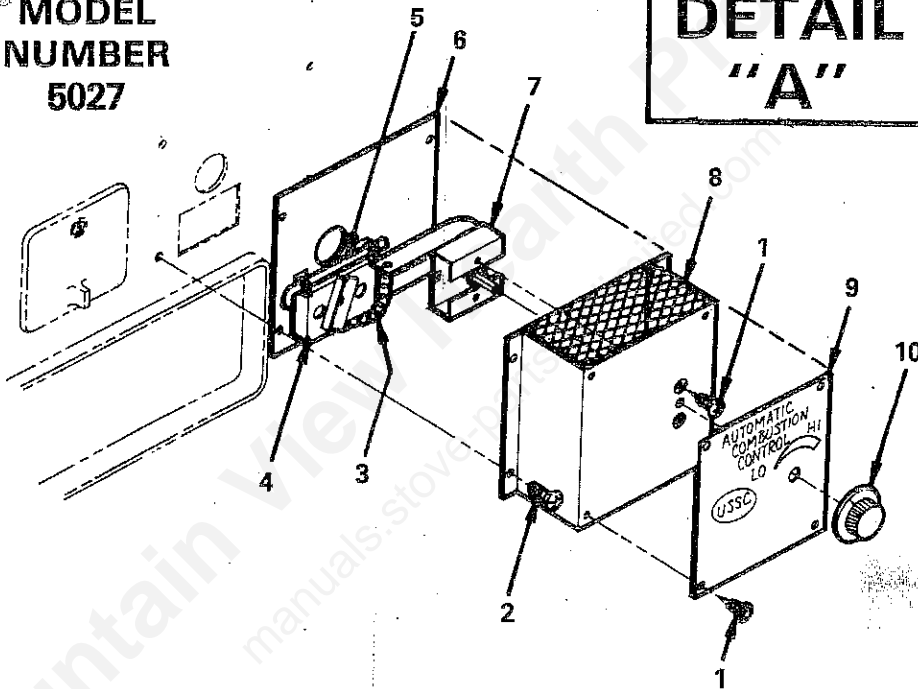
Key No.	Part No.	Description
1	83134	Screw, Sheet Metal (# 10 AB x 1/2 PH TR BLK) (6 Req'd.)
2	83194	Screw, Machine (# 10-32 x 3/8 PH HD THRD. CUT.) (4 Req'd.)
3	86318	Chain, Thermostat Linkage
4	22245	Air Inlet Damper Door Assembly
5	22252	Pin, Air Inlet Damper Hinge
6	22241	Plate, T'stat/Damper Mounting
7	81130	Thermostat Assembly
8	67936	Thermostat Housing Assembly
9	85419	Label Plate, T'stat/ Caution
10	89142	Knob, Thermostat

Repair Parts

AUTOMATIC WOOD/COAL BURNING CIRCULATOR HEATER

MODEL
NUMBER
5027

**DETAIL
"A"**

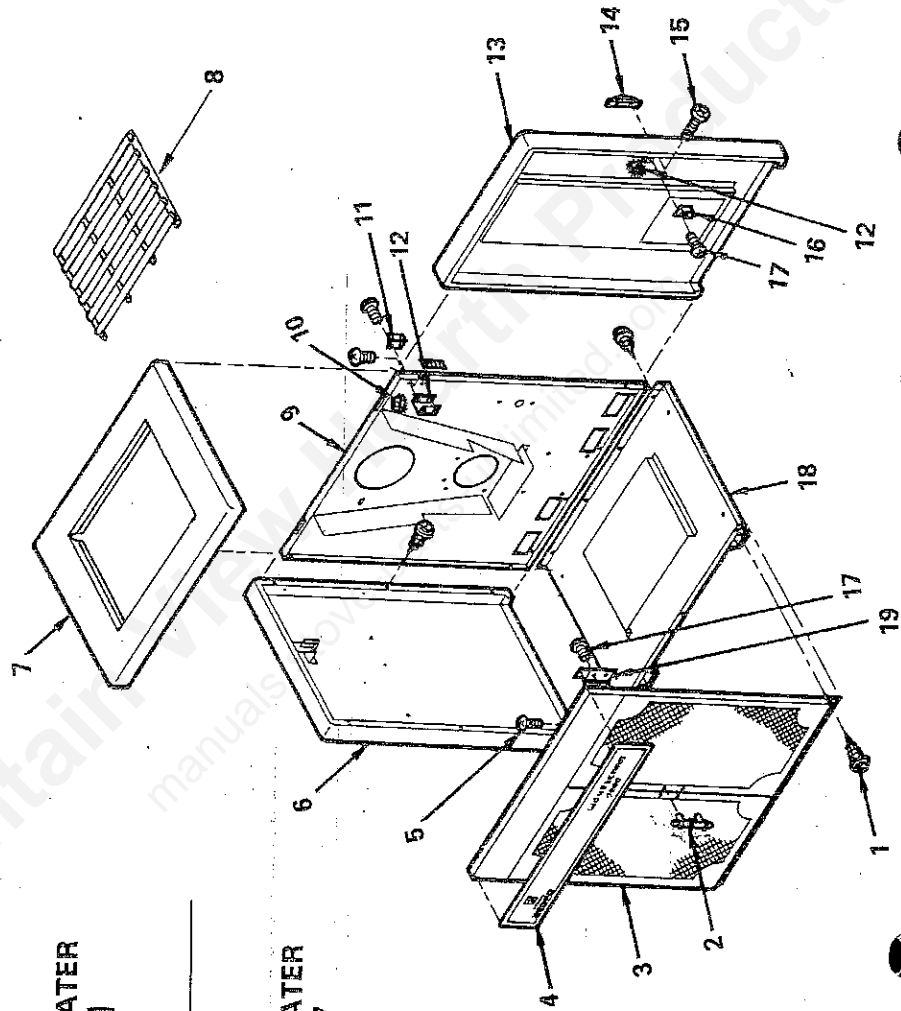


Key No.	Part No.	Description
1	83134	Screw, Sheet Metal (# 10 AB x 1/2 PH TR BLK) (6 Req'd.)
2	83194	Screw, Machine (# 10-32 x 3/8 PH HD THRD. CUT.) (4 Req'd.)
3	86318	Chain, Thermostat Linkage
4	67970	Air Inlet Damper Door Assembly
5	22252	Pin, Air Inlet Damper Hinge
6	22241	Plate, T'state/Damper Mounting
7	81130	Thermostat Assembly
8	67936	Thermostat Housing Assembly
9	85419	Label Plate, T'stat/ Caution
10	89142	Knob, Thermostat

repair parts

**AUTOMATIC WOOD
BURNING CIRCULATOR HEATER
MODEL NUMBER 5021**

**AUTOMATIC WOOD/COAL
BURNING CIRCULATOR HEATER
MODEL NUMBER 5027**



repair parts

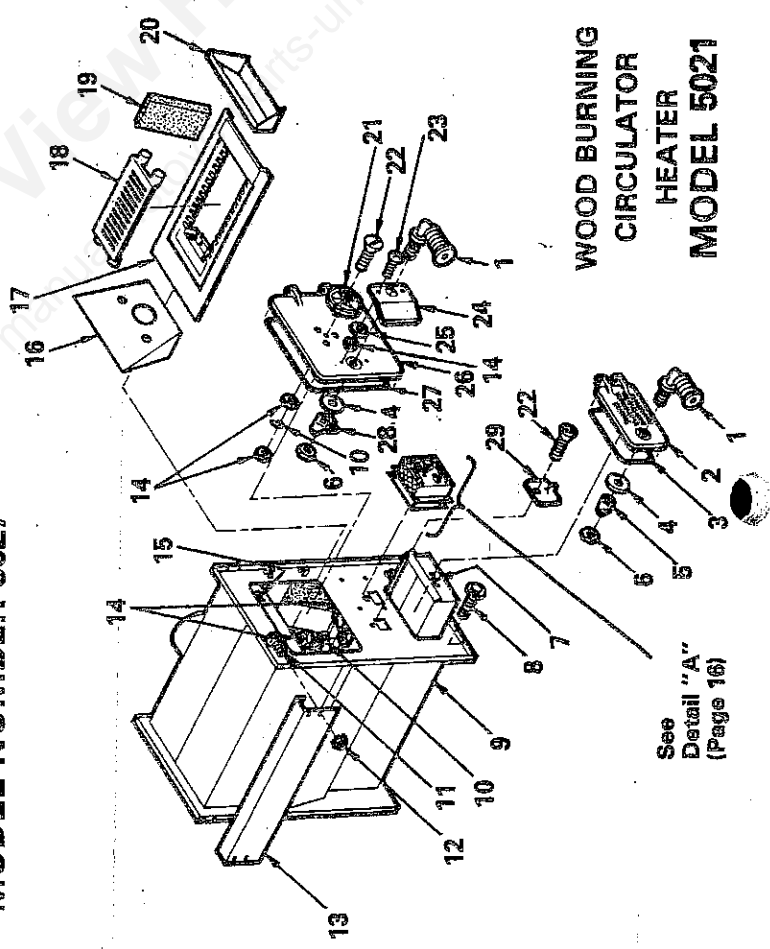
AUTOMATIC WOOD BURNING CIRCULATOR HEATER MODEL NUMBER 5021

AUTOMATIC WOOD/COAL BURNING CIRCULATOR HEATER MODEL NUMBER 5027

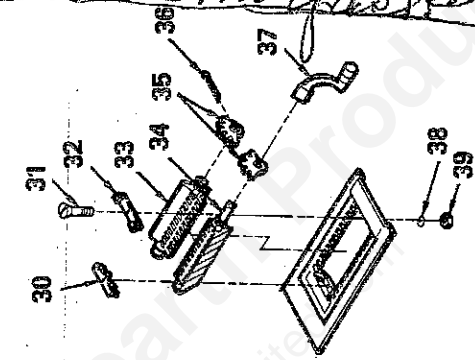
Key No.	Part No.	Description
1	83166	Screw, Sheet Metal (# 10A x 1/2 SL HX W BLK) (13 Req'd.)
2	89176	Handle, Cabinet Front (2-Req'd.)
3	67947	Cabinet Front Panel Assembly
4	85423	Label Plate, Control Panel (Wonder Wood - 5021)
	85418	Label Plate, Control Panel (Wonder Coal - 5027)
5	83033	Machine Screw, # 8-32 x 1/4" (PH RH F) (4-Req'd.)
6	22236	Cabinet Side (L/H) Assembly
7	67949	Cabinet Top Assembly
8	22476	Cabinet Top Grill Assembly
9	22238	Cabinet Back Assembly
10	83110	Square Nut, #10-24 Hex (12-Req'd)
11	89065	Hinge, Door (3-Req'd.)
12	22267	Brace, Cabinet Back/Firebox
13	67938	Cabinet Side (R/H) Assembly
14	89211	Handle, Cabinet Door
15	83264	Screw, Plastic Tapping (2-Req'd.)
16	83283	Latch, Spring
17	83005	Machine Screw, #10-24 x 1/2" (PH TR HD BLK) (13-Req'd.)
18	67939	Cabinet/Firebox Base Assembly
19	22266	Brace, Cabinet Front/Firebox

*Flue Collar made of Steel and welded
in Units there is no gasket*

repair parts
AUTOMATIC WOOD BURNING CIRCULATOR HEATER
MODEL NUMBER 5021
AUTOMATIC WOOD/COAL BURNING CIRCULATOR
MODEL NUMBER 5027



**WOOD BURNING
CIRCULATOR
HEATER
MODEL 5021**



**WOOD/COAL BURNING
CIRCULATOR HEATER
MODEL 5027**

See
Detail "A"
(Page 16)

repair parts

**AUTOMATIC WOOD BURNING CIRCULATOR HEATER
MODEL NUMBER 5021**

**AUTOMATIC WOOD/COAL BURNING CIRCULATOR HEATER
MODEL NUMBER 5027**

Key No.	Part No.	Description
1	89210	Handle, Circulator (2 Req'd.)
2	22255	Door, Ash
3	22159	Gasket, Ash Door Rope
4	83835	Washer, Spacer (2 Req'd.)
5	22148	Latch, Ash Door
6	83243	Nut, Hex — 7/16 - 20 (Fine Thrd.) Locking (2 Req'd.)
7	67880	Pan, Ash
8	83236	Screw, Machine (1/4 - 20 3/4" Self Thrd. HX W HD BLK) (4-Req'd.)
9	67671	Firebox Body Assembly (5021)
	67937	Firebox Body Assembly (5027)
10	83002	Washer, Lock (1/4" split) (2-Req'd.)
11	83005	Screw, Machine #10-24 x 1/2" (PH TR HD BLK)
12	83244	Nut, Keps #10-24 Hex w/Starwasher (2 Req'd.)
13	22265	Baffle, Control Panel/Front
14	83072	Nut, Hex (1/4 - 20) (4-Req'd.)
15	22270	Curtain, Smoke
16	40205	Liner, Firebox Back
17	40208	Frame, Grate
18	40201	Grate, Wood
19	89066	Firebrick (12-Req'd.)
20	40220	Cast Iron Front Liner
21	40056	Wheel, Draft - Air Shutter
22	83105	Screw, Machine (1/4 - 20 x 1-1/2 SL FL HD F) (2 Req'd.)
23	83202	Screw, Machine (#10 - 24 x 3/4 PH RD HD BLK) (2 Req'd.)
24	22253	Shield, Feed Door Handle Heat
25	83091	Washer, Spacer (#10) (2-Req'd.)
26	22243	Door, Feed <i>Plain</i>
27	22158	Gasket, Feed Door Rope
28	67887	Latch, Feed Door (Two-Step)
29	40206	Cover, Coal Grate Shaker
30	40210	Bracket, Rear Hold-down
31	83256	Screw, Machine (#10 - 24 x 2 SL FL HD PLN) (2-Req'd.)
32	40209	Bracket, Front Hold-down
33	40212	Grate, Shaker (Right)
34	40211	Grate, Shaker (Left)
35	40213	Gear, Shaker (2 Req'd.)
36	83830	Pin, Cotter (3/16" x 1-1/4 steel) (2 Req'd.)
37	40214	Handle, Shaker
38	83020	Washer, Lock (#10) (2 Req'd.)
39	83004	Nut, Hex (#10-24) (2 Req'd.)
*	85425B	Owner's Manual (5021 / 5027)

6 1/4 x 1 1/2

67944 Comp

*Handle
Effects*

152
10
132
10.12
10.12
1.20
05
2.04
08
04

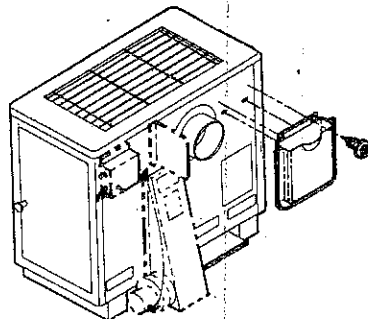
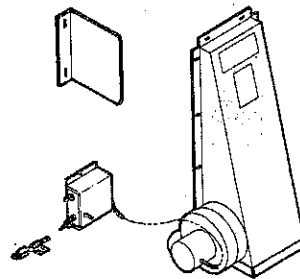
* Not Shown

Trouble Shooting Tips for Model 5021/5027

List of Problems	Possible Cause	Solutions
1. Smoking when feed door is open	a) Insufficient Draft. b) Clogged chimney or chimney connector. c) Down draft in chimney.	a) Set Thermostat higher. b) Clean Chimney. c) Add raincap to chimney.
2. Flame spillage when feed door is open.	a) Insufficient draft. b) Smothering fire when adding fresh fuel.	a) Same as No. 1. b) Add fuel so as not to smother fire.
3. Creosote build-up.	a) Burning green wood (not seasoned or dry). b) Thermostat setting too low for type fuel.	a) Burn only seasoned wood. b) Set thermostat higher to attain higher flue temperatures. This will aid in preventing build-up of creosote.
4. Heater does not heat.	a) Wood not seasoned and dry. b) Blower control set too low c) Insufficient flue draft. d) Ash door left open.	a) Allow wood to season in a dry, well ventilated area for 6 months. b) Set blower control to higher temperature. c) Set flue draft (see p. 9). d) Close ash door.

OPTIONAL KITS FOR MODEL 5021/5027

F36 BLOWER KIT FOR 5021 / 5027



HU26 HUMIDIFIER KIT FOR 5021 / 5027

Grate Assembly Removal and Replacement

**USE GLOVES WHEN REMOVING OR
REPLACING FIREBOX PARTS**

1. Remove front and back cast iron and liners. Pry firebrick out of position using a screw driver and remove all.
2. Adjust shaker grate to fully open position. Reach to rear of the firebox and lift the back of grate assembly (See Fig. 15).
3. While keeping the back of the grate assembly higher than the front, lift the grate assembly and turn diagonally to pass through the feed door opening and remove (See Fig. 16). Reverse procedure to install.

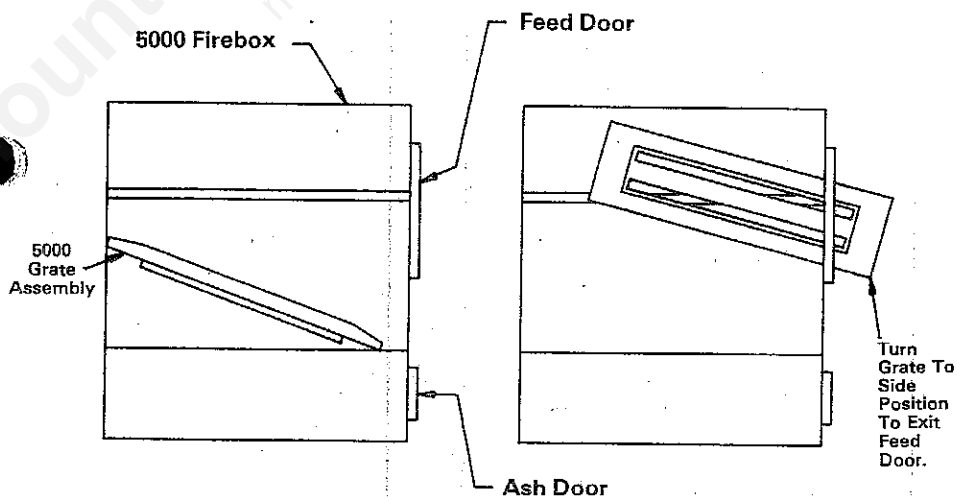


FIG. 15

FIG. 16

owners manual

HOW TO ORDER REPAIR PARTS

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, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER
2. The PART DESCRIPTION
3. The MODEL NUMBER: 5021
5027
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