

Sears

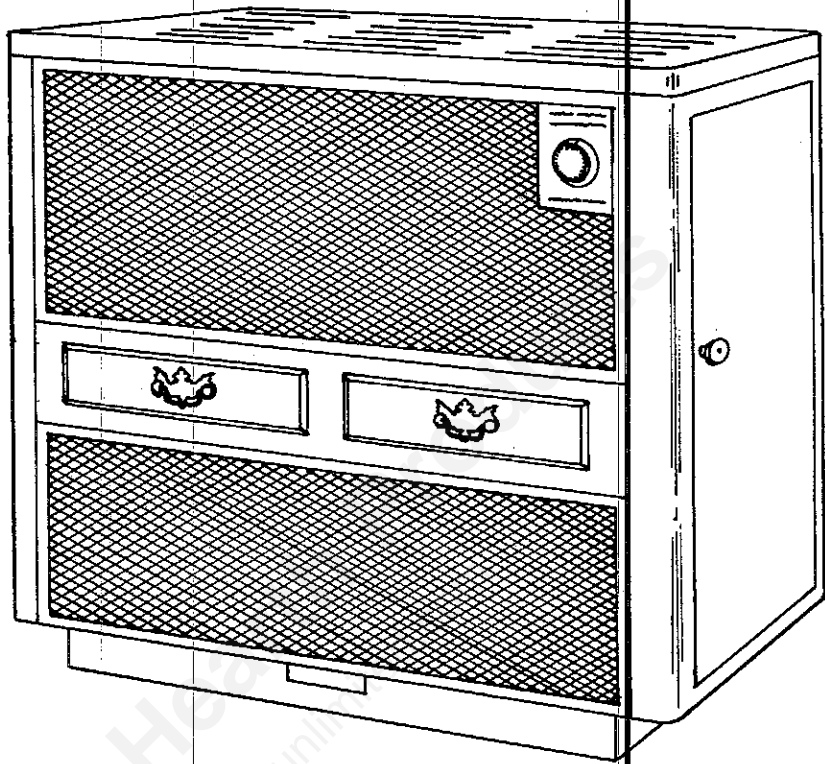
owners
manual

MODEL NUMBER
143.840620

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

Do Not Use This
Heater in Mobile
Homes or Trailers

Save This Manual
For Future Reference



AUTOMATIC COAL OR WOOD BURNING CIRCULATOR

- Assembly
- Installation
- Operation
- Repair Parts

Sears, Roebuck and Co., Chicago, Ill. 60684 U.S.A.

PRINTED IN U.S.A.

FORM 85247 2/79

introduction!

Please read our instructions before you install and use your new Coal or Wood Burning Circulator Heater. This will help you obtain the full benefits from your heater.

If you want your heater professionally installed, contact your SEARS SALESMAN. He will arrange for prompt, quality installation by SEARS AUTHORIZED INSTALLERS.

SEARS INSTALLATION POLICY

All installation labor arranged by SEARS shall be performed in a neat, workman-like manner in accordance with generally accepted trade practices. Further, all installations shall comply with all local laws, codes, regulations, and ordinances. The customer shall also be protected, during installation, by insurance relating to property damage, workmen's compensation and public liability.

SEARS INSTALLATION WARRANTY

In addition to any warranty extended to you on the Sears merchandise involved, which warranty becomes effective the date the merchandise is installed, should the workmanship of any Sears arranged installation prove faulty within one year. Sears will, upon notice from you, cause such faults to be corrected at no additional cost to you.

tools and materials needed

TOOLS

Pencil
6 Foot Folding Rule or Tape
Tin Snips
Drill, Hand or Electric
Drill Bit (For Sheet Metal Screws)

MATERIALS

6" Pipe, 6" Elbow, Collar and Thimble; as required (24 Gauge min.)
1/2" Sheet metal screws
6" Inside diameter Listed Residential Solid Fuel Factory-Built
Chimney or existing masonry chimney.
Floor Protector material, 3'0" x 4'6", as specified on Page 4.

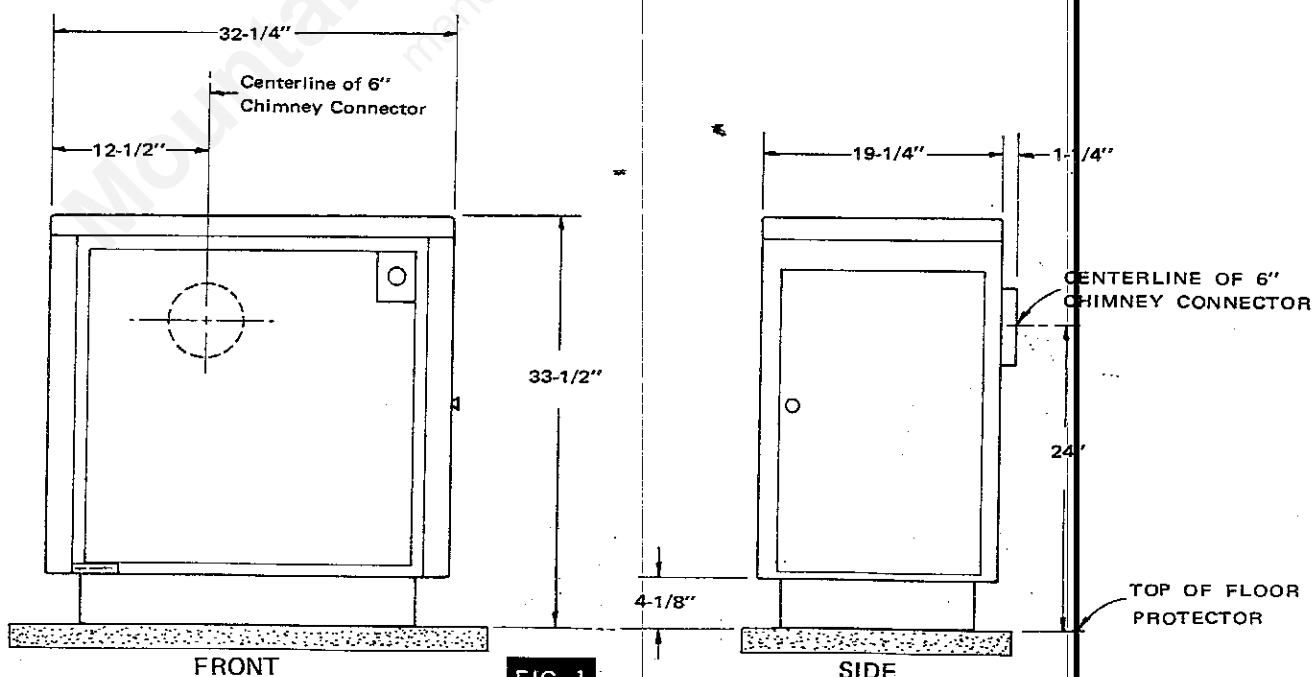
rules for safe installation and operation

Read these rules and the instructions carefully. Failure to follow them could cause a malfunction of the heater. This could result in death, serious bodily injury, and/or property damage.

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. Make sure the chimney is high enough to give a good draft.
4. Do not connect a coal or 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 Listed Residential Solid Fuel Factory-Built Chimney.
5. Inspect chimney connector and chimney before and frequently during the heating season for any accumulation of creosote or soot which must be removed (see CHIMNEY MAINTENANCE, Page 7).
6. 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.
7. Keep the ashpit section free of excess ashes.
8. CAST IRON PARTS MUST BE "SEASONED" TO AVOID CRACKING. BUILD ONLY SMALL FIRES DURING YOUR EARLY USE. Never build extremely large fires in your heater.
9. To prevent injury; do not allow anyone who is unfamiliar with the operation to use the heater.
10. 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-10-1978. The address of the NFPA is 470 Atlantic Avenue, Boston, MA 02210.
11. Disposal of Ashes—Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.
12. CARING FOR ENAMELED PARTS—This heater has an enameled outside jacket. Enamel baked onto the steel or iron is very serviceable but it will not stand rough handling or abuse. When setting up 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.

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

AUTOMATIC CIRCULATOR DIMENSIONS



locating the heater

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

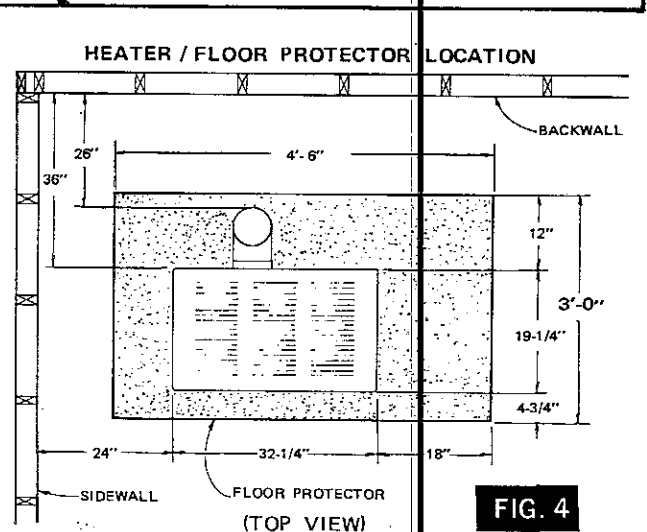
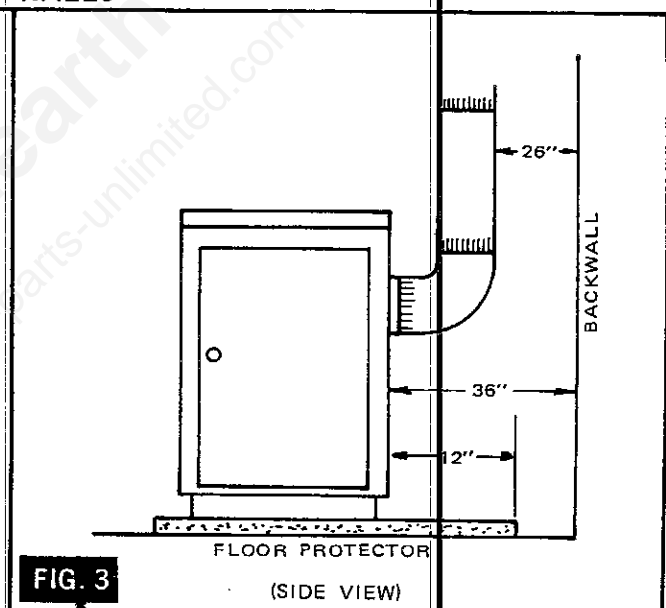
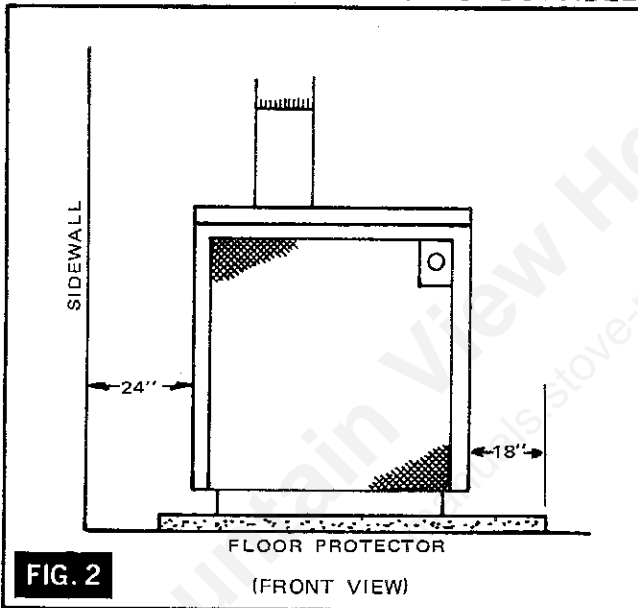
1. The chimney connection should be as short as possible. The heater must have its own chimney. Do not connect any other appliance to the same flue.

If there is no chimney near where you wish to place the heater, you can use a Listed Residential Solid Fuel Factory-Built Chimney (Fig. 6).

2. Place the heater on solid masonry or solid concrete. When the heater is used on a combustible floor surface, a floor protector of brick or 2-1/4" patio stone should be used. The floor protector should extend 18" beyond the door side of the heater and should extend under the connector pipe in the back (Fig. 4).

3. Check Figures 2, 3 & 4. You should have at least the clearances shown from the heater and the connector pipe to combustible surfaces. If you have 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



NOTE: BEFORE FIRING HEATER

1. Remove plastic knob from inside of cabinet door and install on outside.
2. Slide firebricks toward the rear so no gaps remain between them.

chimney connection

MASONRY CHIMNEY

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

Do not connect two heaters into the same chimney flue.

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.

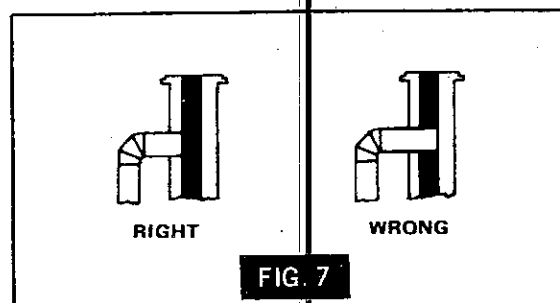
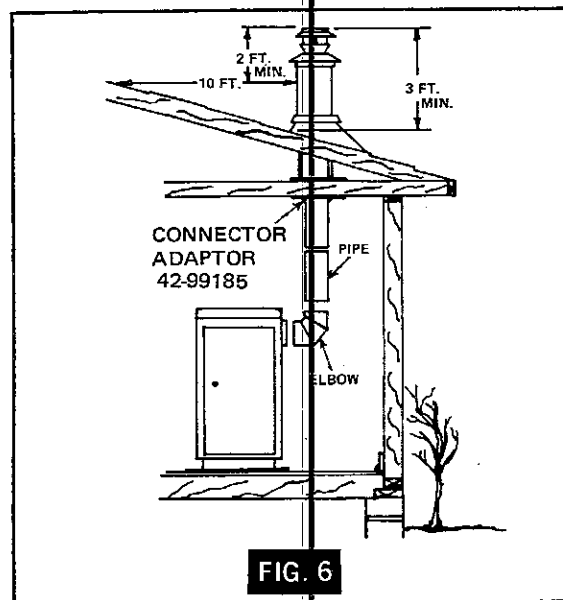
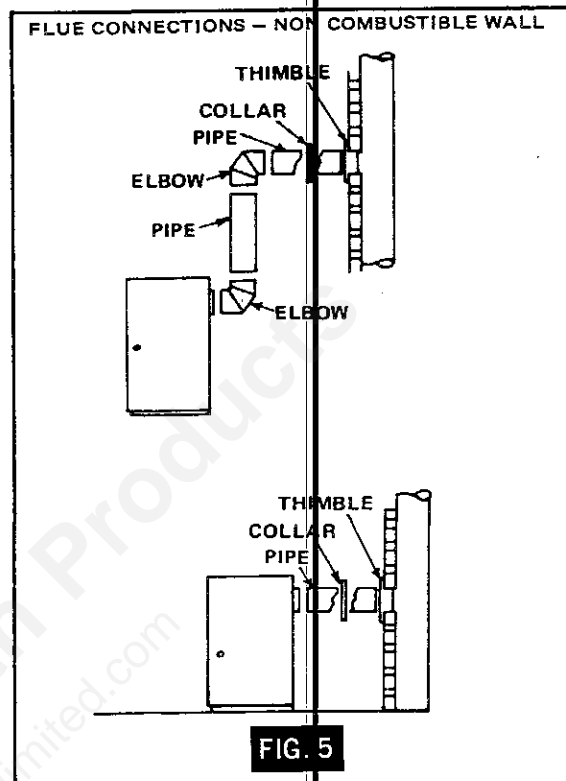
LISTED CHIMNEY

Carefully follow chimney manufacturer's instructions. Use only a Listed Residential Solid Fuel Factory-Built 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 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).

RULES FOR STOVEPIPE INSTALLATION

1. The crimped end of the stovepipe fits inside the heater flue collar. Additional pipe and elbow should be installed **CRIMPED END TOWARD THE HEATER**. This will allow any condensation in the flue to run back into the heater.
2. Any horizontal pipe should be pitched upward toward the chimney at least 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. Furnace cement is available at most hardware stores.
6. Use 3 sheet metal screws at each joint to make the piping rigid.
7. Do not put a damper in the stovepipe.



operating instructions

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.

Hardwood, 18" to 22" should be split and air dried (seasoned) for 6 months to obtain maximum burning efficiency.

LIGHTING

1. Set the thermostat on "HIGH" to provide 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 to maintain desired temperature in room. "MEDIUM" setting is normally satisfactory. Set higher or lower for maximum comfort.

ADDING FUEL

When possible, small amounts of fuel should be added each hour or so instead of adding large quantities of fresh fuel every 12 to 18 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. Never add more than 50 lbs. at one time.
 - c. Stir the charge and observe. The new coal should be burning briskly before you close the doors and turn the thermostat down.
4. Shake grates vigorously fore and aft 1/2" to dump ashes into ash pan. Do this at least once every 12 hours of operation.
5. Empty ash pan regularly. Do not allow ashes to build up to grate as grate warpage and burnout will occur, and spillage may result when handling. Dispose of hot ashes properly (see note 12 on page 3).

MINIMUM FIRE

The rate of burning at the low setting can be further adjusted by opening or closing the air shutter (Fig. 8) on the draft control 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).

NOTE: Opening the minimum fire air shutter may cause overheating at "LOW" thermostat setting. Therefore, open the air shutter only as needed.

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 UNIT.

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.

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

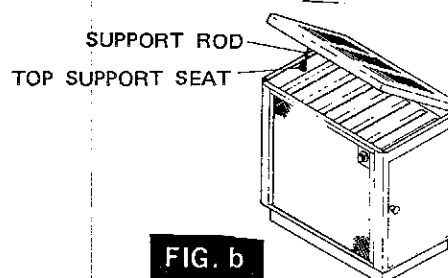
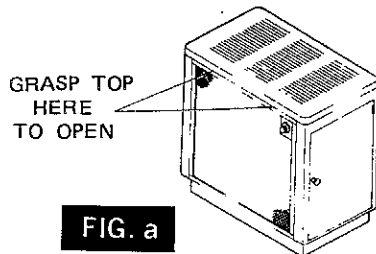
KEEP ALL FLAMMABLE LIQUIDS, ESPECIALLY GASOLINE, FROM THE VICINITY OF THE UNIT WHETHER IN USE OR IN STORAGE.

operation of lift top

CAUTION—DO NOT OPEN OR CLOSE TOP WHEN UNIT IS HOT!

To open, grasp TOP at front and lift all the way, then gently lower the TOP until the TOP SUPPORT ROD latches to hold the TOP (Fig. a).

To close, lift TOP until the TOP SUPPORT ROD is unlatched. Pull the ROD forward and lower the TOP (Fig. b).



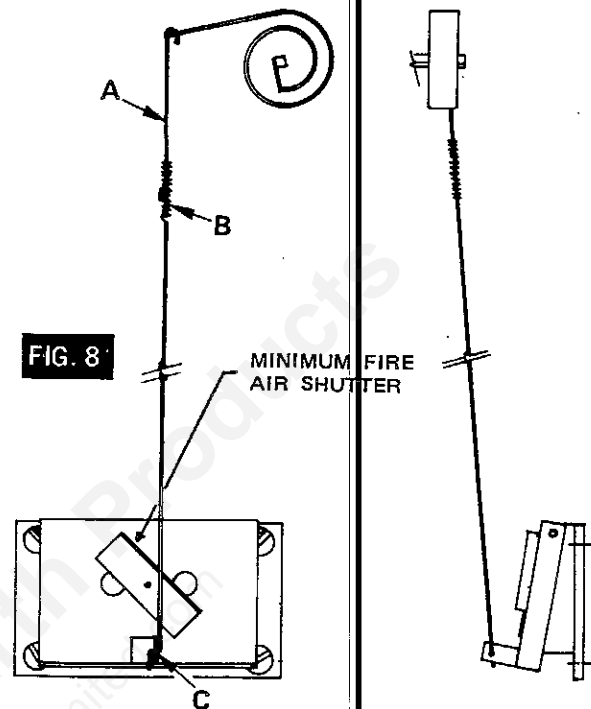
adjusting the thermostat

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.

If the room temperature is not satisfactory, the thermostat operating range may be changed as follows:

- A. To increase the amount of heat at a "HIGH" setting, adjust the wire linkage to increase the draft damper opening.
1. Unhook linkage wire at Point "C".
 2. Take Point "A" in left hand and "B" in right hand, then turn "B" clockwise about 3 turns.
 3. Then hook linkage wire back to draft control damper door at Point "C".
- B. To decrease the amount of heat at "LOW" setting:
1. Check feed and ash doors to be sure that they are closed tightly.
 2. Check the connector pipe to see that it is sealed in the flue collar and at all joints.
 3. If no air leaks are found, adjust linkage as above except turn "B" counter clockwise about 3 turns.

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



service hints

Do not expect a heater to draw. It is the chimney that creates the draft. Insufficient draft may cause slow burning or smoking. 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. Soot or creosote buildup can block the chimney.
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).

chimney maintenance

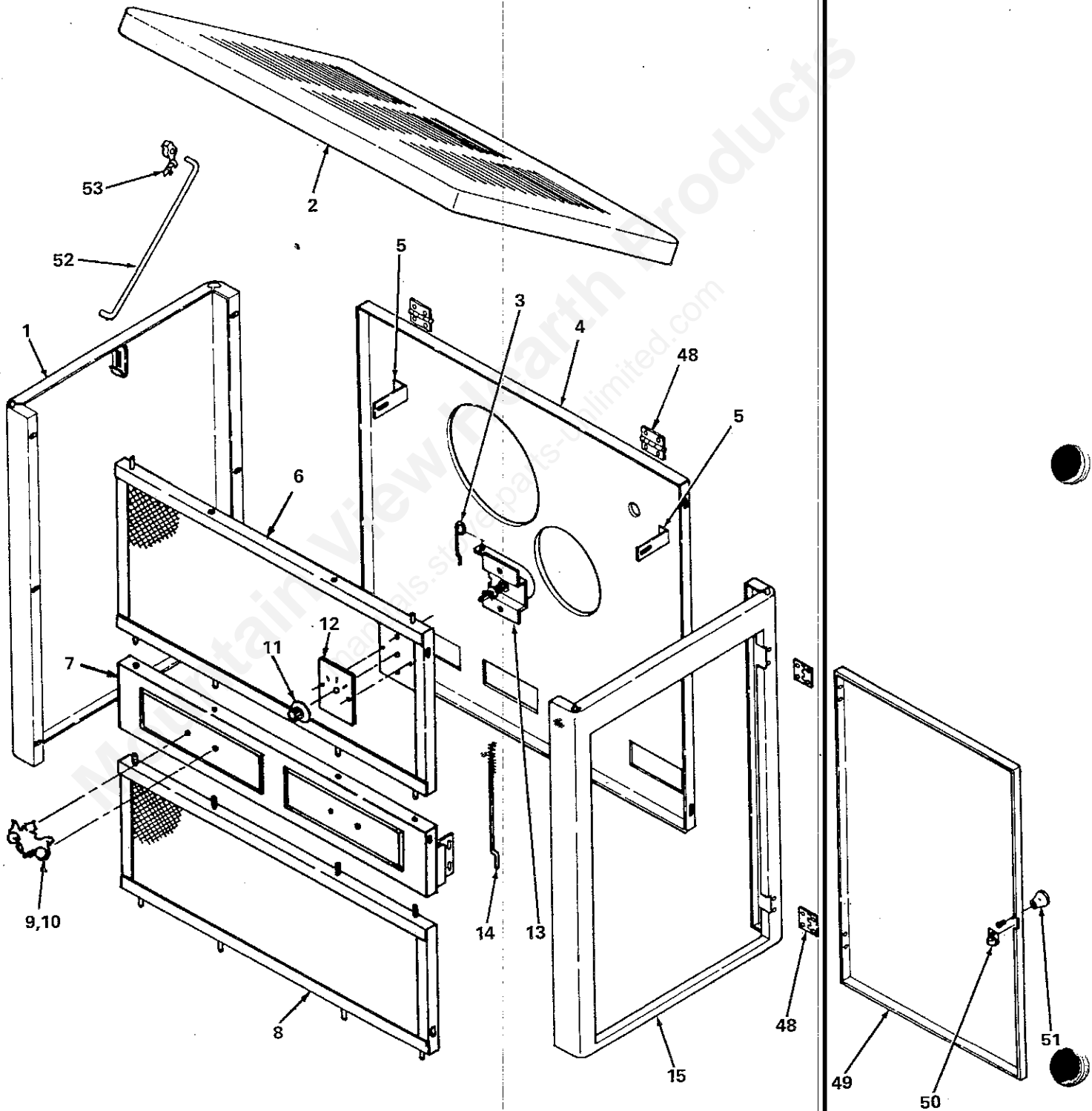
When solid fuel is burned slowly, it produces creosote or soot which accumulates on the flue lining and when ignited, makes an extremely hot chimney fire. (This is especially true with unseasoned wood).

The chimney connector and chimney should be inspected before and frequently during the heating season to determine if a creosote or soot buildup has occurred. If creosote or soot has accumulated, it should be removed to reduce the risk of a chimney fire and help to eliminate smoking problems.

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.

repair parts

SEARS AUTOMATIC COAL OR WOOD BURNING
CIRCULATOR MODEL NO. 143.840620



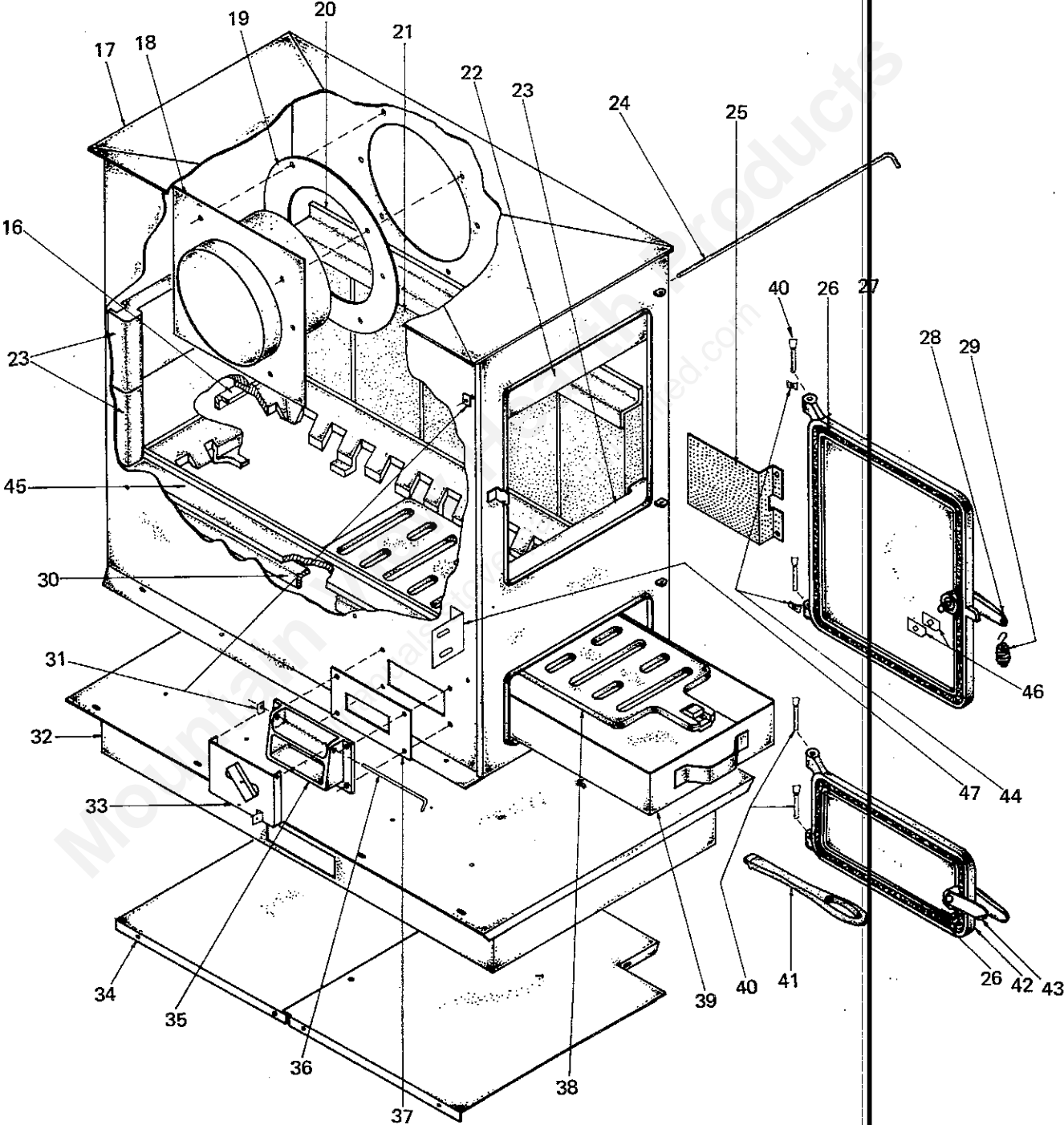
repair parts

SEARS AUTOMATIC COAL OR WOOD BURNING
CIRCULATOR MODEL NO. 143.840620

Key No.	Part No.	Description
1	67512	Cabinet Left Side
2	67513	Cabinet Top
3	86192	Thermostat Linkage
4	67514	Cabinet Back
5	21063	Back Brace (2 Req'd)
6	67565	Upper Front Panel
7	67561	Front Panel
8	67564	Lower Front Panel
9	89034	Pull Handle (2 Req'd.)
10	11450	Handle Bracket (2 Req'd.—not shown)
11	89142	Thermostat Knob
12	85204	Thermostat Dial Indicator
13	67187	Thermostat
14	86191	Thermostat Linkage Adjuster
15	67194	Cabinet Door Frame
48	89065	Hinge (4 Req'd.)
49	67243	Cabinet Door
50	83093	Stove Spring Latch
51	89062	Door Knob
52	21593	Hinge Support
53	83833	Hinge Clip

repair parts

SEARS AUTOMATIC COAL OR WOOD BURNING
CIRCULATOR MODEL NO. 143.840620



repair parts

SEARS AUTOMATIC COAL OR WOOD BURNING
CIRCULATOR MODEL NO. 143.840620

Key No.	Part No.	Description
16	40130	Grate Support -- Rear (Cast Iron)
17	67479	Heat Jacket
18	66960	Flue Collar
19	88032	Flue Collar Gasket
20	40132	Top Brick Retainer (Cast Iron, 2 Req'd.)
21	89066	Fire Brick (10 Req'd.)
22	21548	Smoke Curtain
23	40100	Liner (Cast Iron, 3 Req'd.)
24	17210	Hinge Pin (Smoke Curtain)
25	17060	Thermostat Baffle
26	88042	Rope Gasket (73", Both Doors)
27	67447	Feed Door (Cast Iron, includes Key Nos. 26, 28, 29, 46)
28	40092	Feed Door Handle (Cast Iron)
29	89920	Handle (2 Req'd.)
30	40131	Grate Support--Sides (Cast Iron, 2 Req'd.)
31	83818	Clip (2 Req'd.)
32	65960	Base
33	67132	Draft Control Damper
34	67266	Floor Shield
35	40075	Draft Damper Frame
36	17200	Hinge Pin (Draft Damper)
37	21552	Throttle Plate
38	40101	Coal Grate (Cast Iron)
39	67444	Ash Pan
40	21430	Hinge Pin (4 Req'd.)
41	40045	Shaker (Cast Iron)
42	67368	Ash Door (Includes Key Nos. 26, 43)
43	LK-26	Latch Kit
44	83819	Clip (4 Req'd.)
45	40102	Coal Grate Frame (Cast Iron)
46	21467	Latch Spacer (2 Req'd.)
47	17270	Front Catch Brace
†	85247	Owners Manual (F642-4479)
†	42-84066	Blower Kit (Optional Assesory)
†	42-99185	Connector Adaptor (Optional Accessory)

† Not Illustrated

Sears

owners
manual
service

MODEL NUMBER
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HOW TO ORDER
REPAIR PARTS

TELL SEARS YOU
WANT IT INSTALLED —
THEN RELAX

AUTOMATIC COAL OR WOOD BURNING CIRCULATOR

Now that you have purchased your Automatic Coal or Wood Circulator should a need ever exist for repair parts or service, simply contact any Sears Service Center and most Sears, Roebuck and Co. stores. Be sure to provide all pertinent facts when you call or visit.

The Model Number will be found on a plate mounted on the back of the heater. Always mention the Model Number when requesting service or repair parts for your 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
4. The SERIAL NUMBER

If the part you need is not stocked locally, your order will be transmitted to a Sears Repair Parts Distribution Center for quick handling.

When Sears arranges the installation, you can be sure the job is done right. We will arrange for professional workmanship. . . and we'll take care of the entire project. What's more, during installation you get insured protection . . . against property damage and also against accidents to workmen. All you have to do is talk to your Sears salesperson or call your nearest Sears store today for detailed information.

Sears, Roebuck and Co., Chicago, Ill. 60684 U.S.A.