

Sears

owners manual

**MODEL NUMBER
143.840622**

Listed By Energy Testing
Laboratory of Maine
No. 79-14

**SBCCI APPROVAL
No. 7966-79**

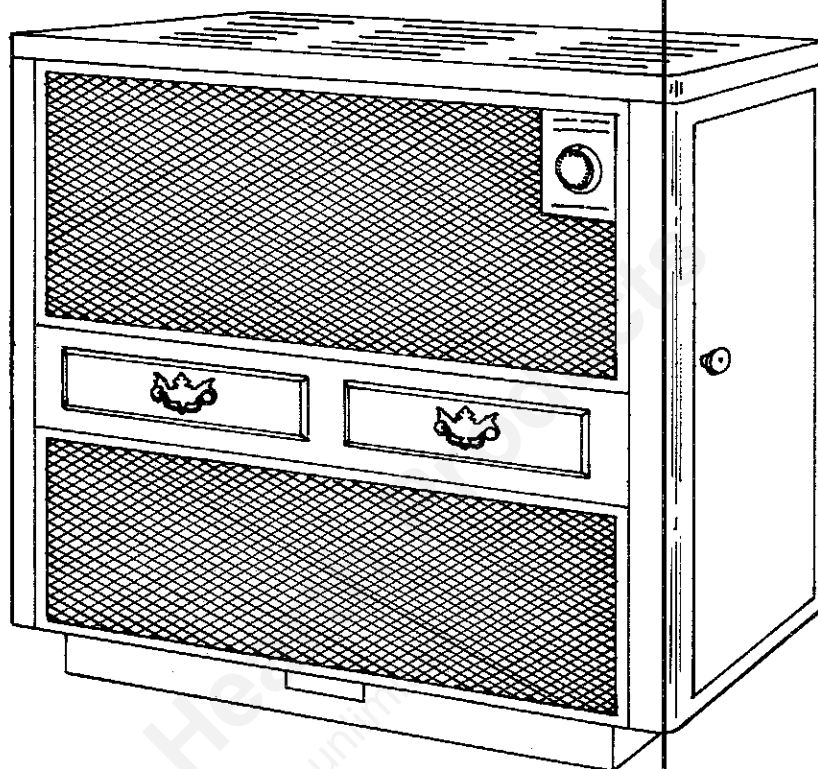


"The Standard Codes"

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 HEATER

- Assembly
- Installation
- Operation
- Repair Parts

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

PRINTED IN U.S.A.

FORM 85247 2/80

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 SALESPERSON. They 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 Underwriters Laboratories (UL)
Listed Residential Solid Fuel Factory-Built
Chimney or existing masonry chimney.
Floor Protector Material, 3'-0" x 4'-6",
as specified on Page 4.

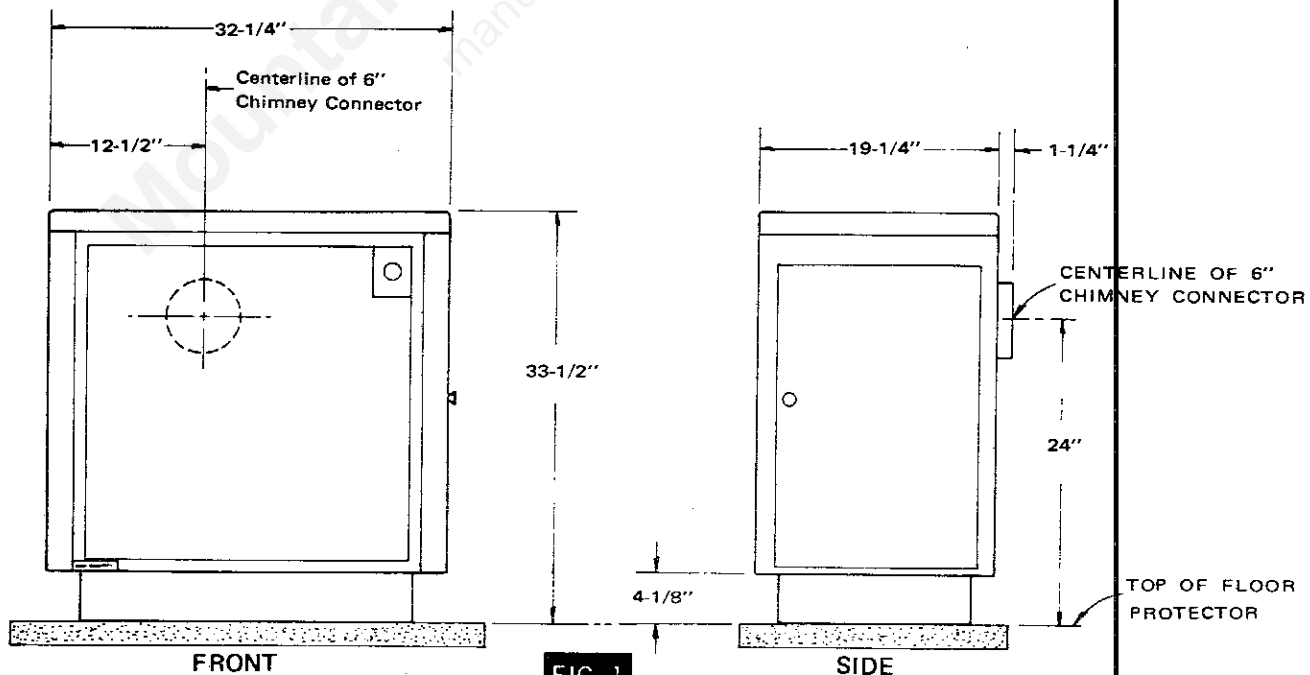
rules for safe installation and operation

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 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 Solid Fuel Factory-Built Chimney.
5. **Inspect chimney** connector and chimney before and frequently during the heating season for any deposit 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. **CAUTION** - The special enamels used on your heater may give off some smoke while they are curing during first few fires. Build small fires at first.
8. **CAST IRON PARTS MUST BE "SEASONED" TO AVOID CRACKING. BUILD ONLY SMALL FIRES .**
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 (NFPA) 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 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. **ENAMEL DISCOLORATION WILL OCCUR IF THE HEATER IS OVERFIRED. FOLLOW OPERATING INSTRUCTIONS CAREFULLY.**
13. **Keep the ashpit section** free of excess ashes.

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

Automatic Circulator Heater Dimensions

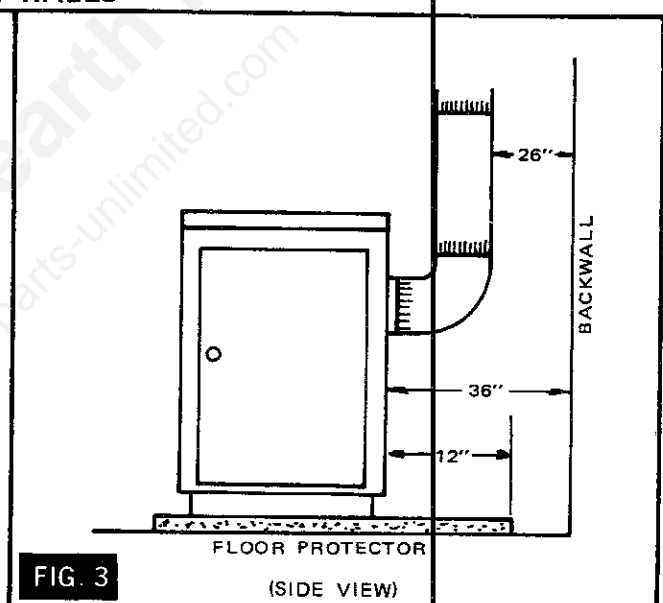
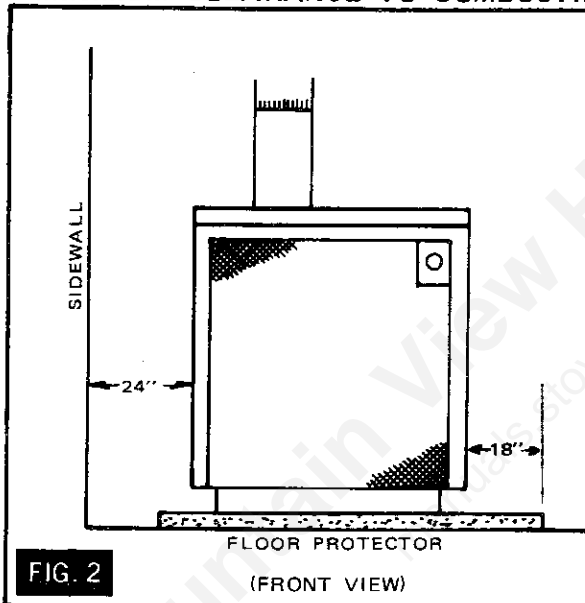


locating the heater

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

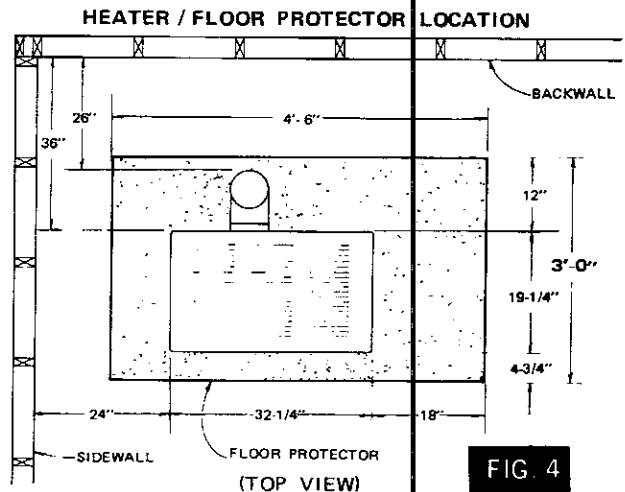
1. Keep the chimney connection as short as possible. The heater must have its own chimney flue. Do not connect any other appliance to the same flue.
If there is no chimney near where you wish to place the heater, you can use a UL Listed Residential Solid Fuel Factory-Built Chimney (Fig. 6). See your Sears salesperson.
2. Place the heater on solid masonry or solid concrete. When the heater is used on a combustible floor, use a floor protector of brick or 2-1/4" thick patio stone. Have the floor protector extend 18" beyond the door side of the heater and under the connector pipe in the back. (Fig. 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



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

Before using an existing masonry chimney, clean the chimney. Inspect the flue liner to be sure it is safe to use. Make repairs before attaching the heater.

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.

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.

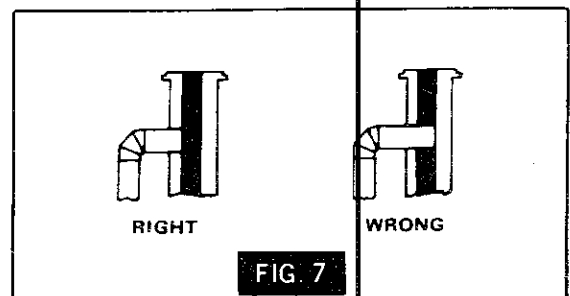
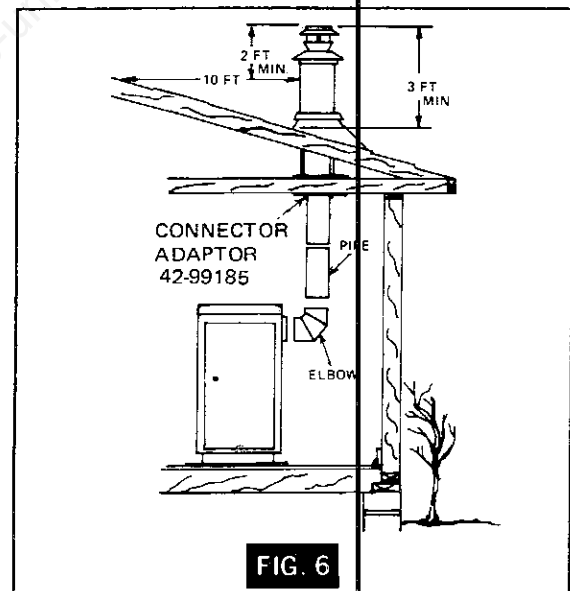
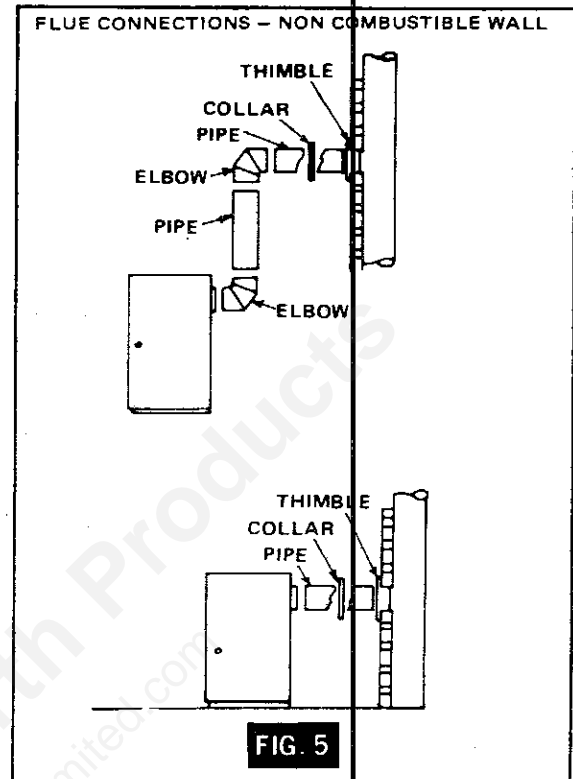
UL LISTED CHIMNEY

Carefully follow chimney manufacturer's instructions. Use only a UL Listed Residential 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. You will also need the connector adapter Sears Stock No. 42-99185.

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).

RULES FOR CONNECTOR PIPE INSTALLATION

1. The crimped end of the connector pipe fits inside the heater flue collar. Install additional pipe and elbow **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. Do not put a damper in a connector pipe.



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.

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. Never add coal above top of fire brick.
 - 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.
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 will warp and burn out, and you might spill the ashes when removing the pan. Dispose of hot ashes properly (see Note 11 on Page 3).

MINIMUM FIRE

The burning rate at the low setting can be further adjusted by opening or closing the minimum fire 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).
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.

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, CHARLOAL LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THE HEATER.

WARNING

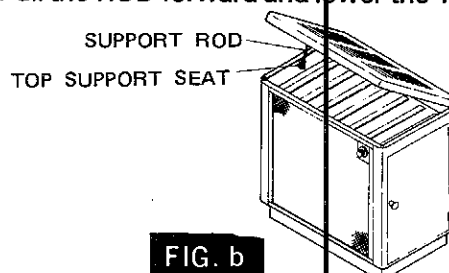
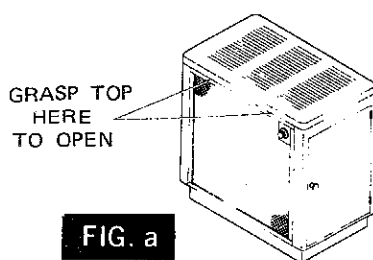
NEVER STORE FLAMMABLE LIQUIDS, ESPECIALLY GASOLINE, IN THE VICINITY OF THE HEATER.

opening the lift top

CAUTION — DO NOT OPEN OR CLOSE TOP WHEN HEATER 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 adjusted at the factory. The operation of the heater may require a change in adjustment. Make adjustments at room temperature.

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

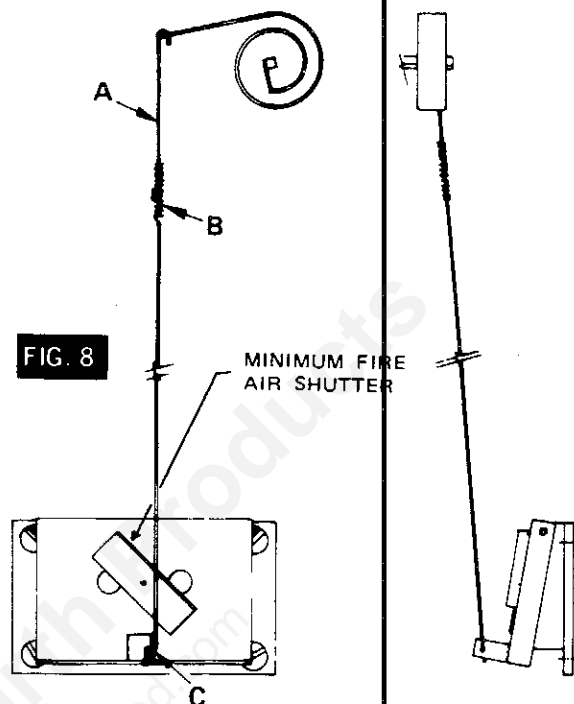
TO INCREASE the amount of heat at a "HIGH" setting, adjust the wire linkage to increase the draft damper opening (Fig. 8).

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".

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" counterclockwise about 3 turns.

NOTE: More than one adjustment may be needed. 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. 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. 7).
2. Do not connect two heaters into the same chimney flue.
3. Do not use the chimney to ventilate the cellar or basement. If there is a cleanout opening at the base of the chimney, close it tightly.
4. If the chimney is too cool, water will condense in the chimney and run back into the heater. Creosote formation will be rapid and may block the chimney. Build a large enough fire to keep the chimney warm to prevent 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).

chimney maintenance

Creosote - Formation and Need for Removal

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited this creosote makes an extremely hot fire.

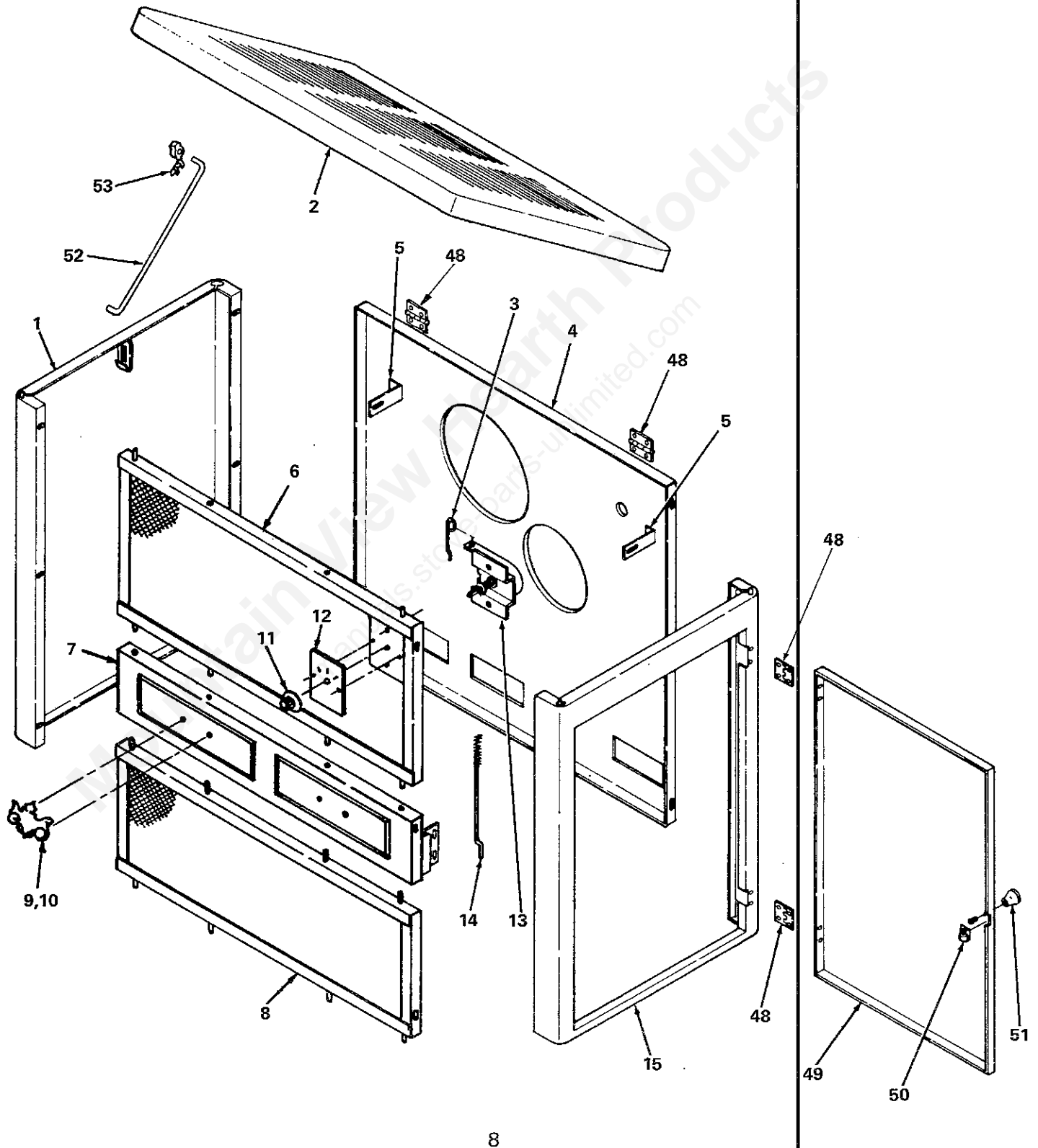
The chimney connector and chimney should be inspected at least twice monthly during the heating season to determine if a creosote buildup has occurred.

If creosote has accumulated it should be removed to reduce the risk of a chimney fire.

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

SEARS AUTOMATIC COAL OR WOOD BURNING
CIRCULATOR MODEL NO. 143.840622



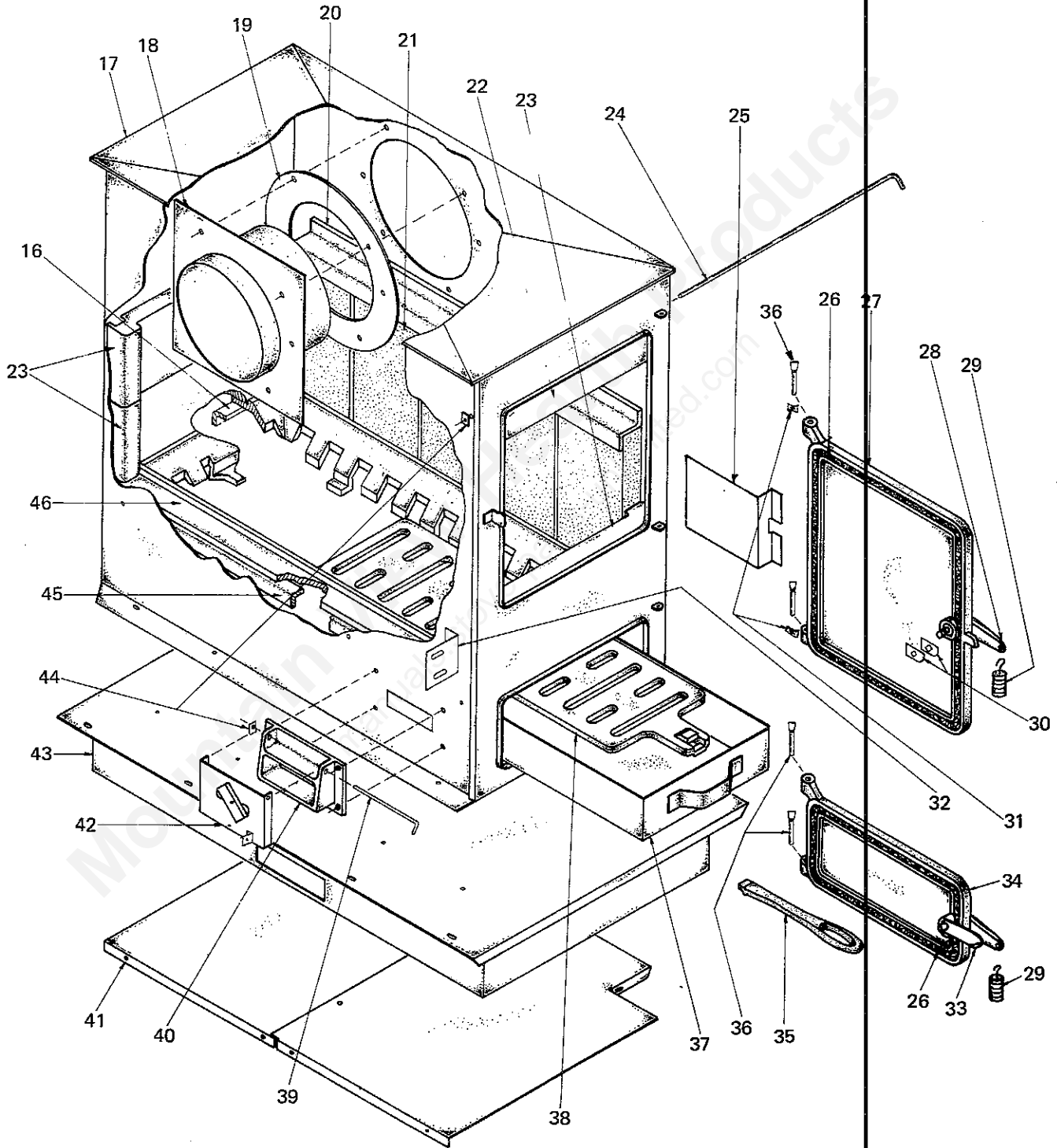
repair parts

SEARS AUTOMATIC COAL OR WOOD BURNING
CIRCULATOR MODEL NO. 143.840622

Key No.	Part No.	Description
1	67593	Cabinet Left Side
2	67592	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	89079	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	67594	Cabinet Door Frame
48	89065	Door Hinge (4 Req'd.)
49	67595	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. 143.840622



repair parts

SEARS AUTOMATIC COAL OR WOOD BURNING
CIRCULATOR MODEL NO. 143.840622

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 Handles & Gasket)
28	40092	Feed Door Handle (Cast Iron)
29	67527	Handle, Wood (2 Req'd.)
30	21467	Latch Spacer (2 Req'd.)
31	83819	Clip (4 Req'd.)
32	17270	Front Brace
33	LK-26	Latch Kit
34	67538	Ash Door (Includes Handle & Gasket)
35	40045	Shaker (Cast Iron)
36	21430	Hinge Pin (4 Req'd.)
37	67444	Ash Pan
38	40101	Coal Grate (Cast Iron)
39	17200	Hinge Pin (Draft Damper)
40	40075	Draft Damper Frame
41	67266	Floor Shield
42	67132	Draft Control Damper
43	65960	Base
44	83819	Clip (2 Req'd.)
45	40131	Side Grate Support (Cast Iron, 2 Req'd.)
46	40102	Coal Grate Frame (Cast Iron)
†	85247-3/80	Owners Manual (F642-7080)
†	42-84066	Blower Kit (Optional Accessory)
†	42-99185	Connector Adapter (Optional Accessory)

† Not Illustrated

Sears

**owners
manual
service**

**MODEL NUMBER
143.840622**

**HOW TO ORDER
REPAIR PARTS**

**TELL SEARS YOU
WANT IT INSTALLED –
THEN RELAX**

AUTOMATIC COAL OR WOOD BURNING CIRCULATOR HEATER

Now that you have purchased your Automatic Coal or Wood Circulator Heater 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.