

**Sears**

**owners  
manual**

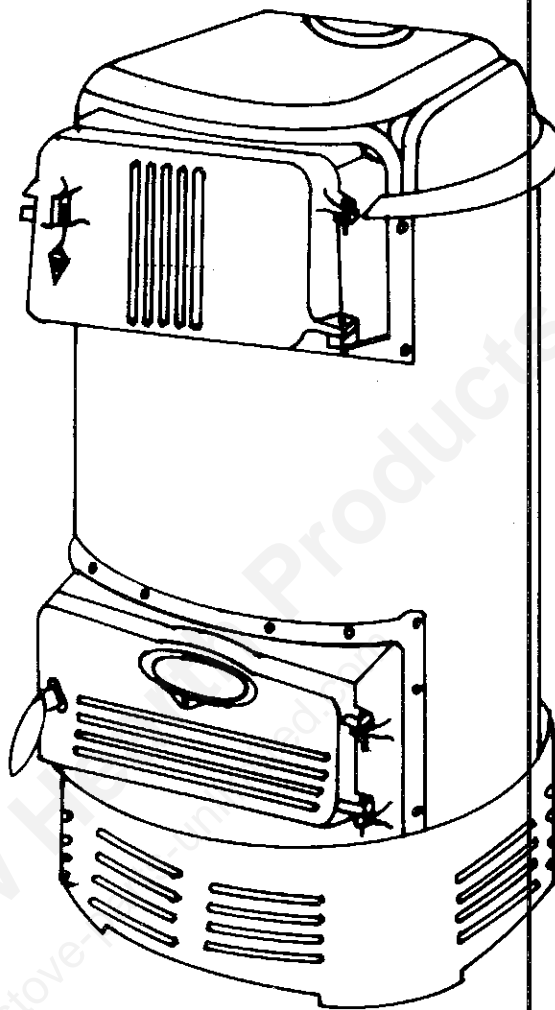
**Model No.  
143.841240  
143.841253**

**CAUTION:**

**Read All Instructions  
Carefully Before Start-  
ing The Installation Or  
Operating The Heater.**

**Do Not Use This  
Heater In Mobile  
Homes or Trailers.**

**Save This Manual For  
Future Reference.**



**RADIANT  
COAL HEATER**

- Assembly
- Installation
- Operation
- Repair Parts

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

# introduction

Please read our instructions before you install and use your new Radiant Coal Heater. This will help you obtain the full benefits from your heater. This will also help you avoid any needless service costs that result from causes we cannot control.

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, workmanlike 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.

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# 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 ft. x 4 ft.  
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 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 each heating season for any deposit of creosote or soot which must be removed (see CHIMNEY MAINTENANCE, page 4).
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, the air must have free access to the room.
7. Keep the ashpit section free of excess ashes. Failure to do so will cause grate warpage and burn out.
8. CAST IRON PARTS MUST BE "SEASONED" TO AVOID CRACKING. BUILD ONLY SMALL FIRES DURING YOUR EARLY USE.
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** -Place ashes 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

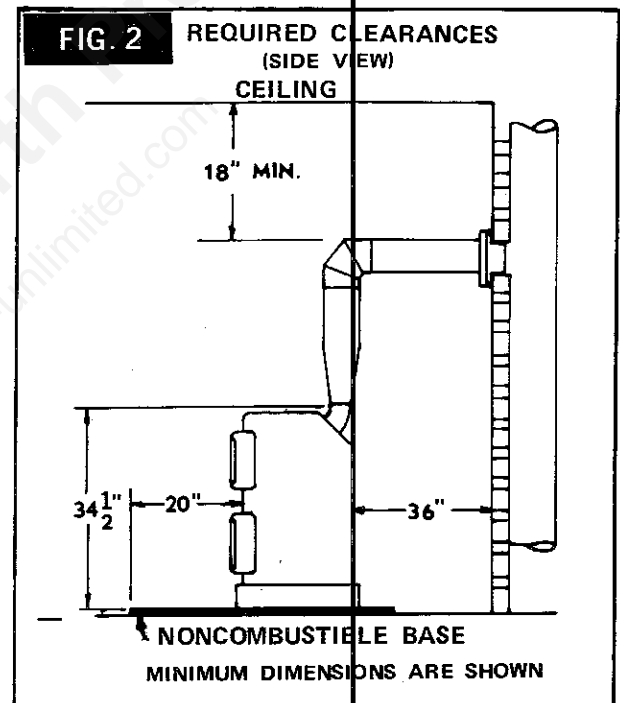
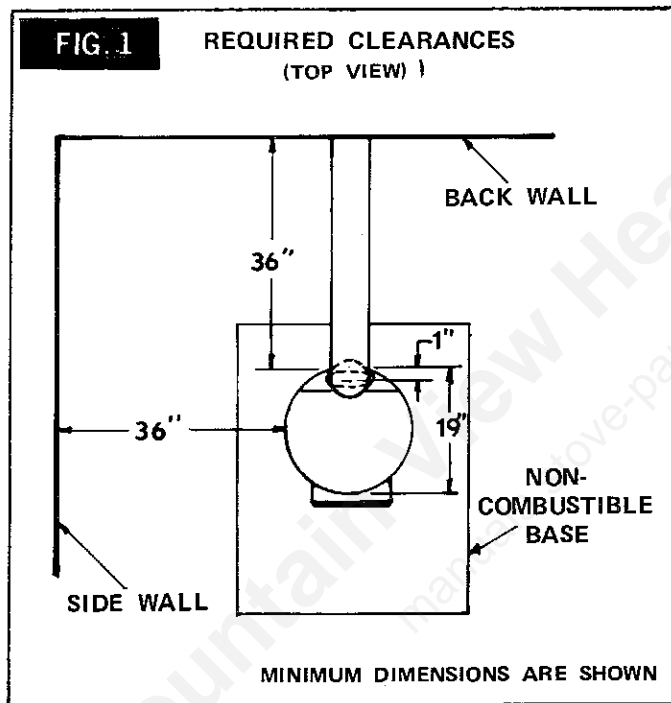
**CAUTION: Do not touch the heater until it has cooled.**

# 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 6" UL Listed Residential Solid Fuel Factory-Built Chimney (Fig. 4).
2. Place the heater directly 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" patio stone. Have the floor protector extend 18" beyond the door side of the heater and under the connector pipe in the back (Fig 1).
3. Check Figs.1 and 2. 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



## 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 or soot 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 sand, 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.

# 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.

Look at Fig. 3. 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.

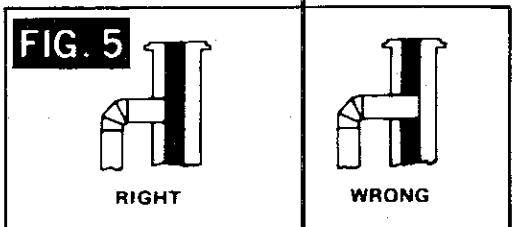
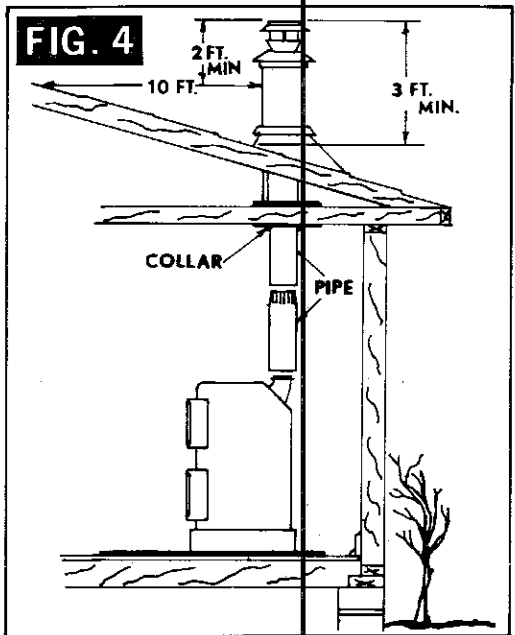
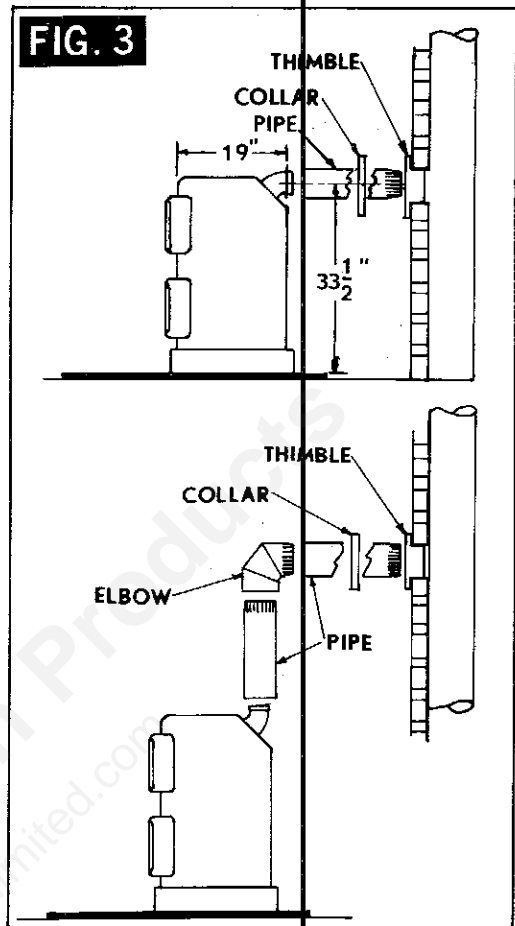
## LISTED CHIMNEY

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

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. 4).

## RULES FOR CONNECTOR PIPE INSTALLATION

1. The plain end of the connector pipe fits outside the heater flue collar. Install additional pipe and elbow **PLAIN END TOWARD 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. 5).
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.



# operation

## CAUTION BE SURE THE FIREBRICK LININGS AND GRATES ARE IN PROPER POSITION BEFORE STARTING A FIRE.

To get the best performance from your heater, follow these recommendations:

1. NEVER OVERHEAT the heater for this will shorten its life. Egg size coal is recommended; however, other sized coal may be used. Never use oil or chemically treated coal in your heater.
2. Keep the top of the coal at least 1 inch below the bottom of the feed door. Be sure to allow for the expansion of coal when it is heated.
3. Never allow ashes to pile up in the ash pan to within 2 inches of the grates. The ashes will shorten the life of the grates.

### TO START A FIRE

1. Open the ash door draft slide to provide maximum draft.
2. Open the feed door and place crushed paper and kindling wood on the grates. Then, light the fire and close the feed door. Let it burn freely before adding the first amount of coal.
3. Add the first charge of coal (about 15 pounds). Allow the fire to burn freely to allow all the gases produced when coal is heated to be driven off before adding the next charge. Add additional fuel as needed or until the fuel is 2 inches below the bottom of the feed door.

**NOTE:** Keep the ash door draft slide open only long enough to get the fire started.

### RECHARGING

Recharge the heater when the coal has burned down to about 6" above the grate.

Shake the grate until a few red coals fall through it. Next, open the ash door draft slide to allow the coals to burn until they are a glowing red. Add fuel as you did when starting the fire.

To avoid the chance of the heater smoking, open the feed door very little at first. Then, slowly open it all the way and add fuel. The amount of fuel you add depends on the weather and the heat wanted. The draft slide should stay open until the full bed is coked. The term coked means that all gases produced when coal is heated have been driven from the new coal.

To regulate your fire, use the ash door draft opening.

### HOLDING A FIRE OVERNIGHT

To hold a fire overnight, place a charge of coal in the heater. Coke it as stated in the section on Recharging. Next, close both the ash door and draft slide.

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## helpful hints

**Do not expect a heater to draw. It is the chimney that creates the draft.**

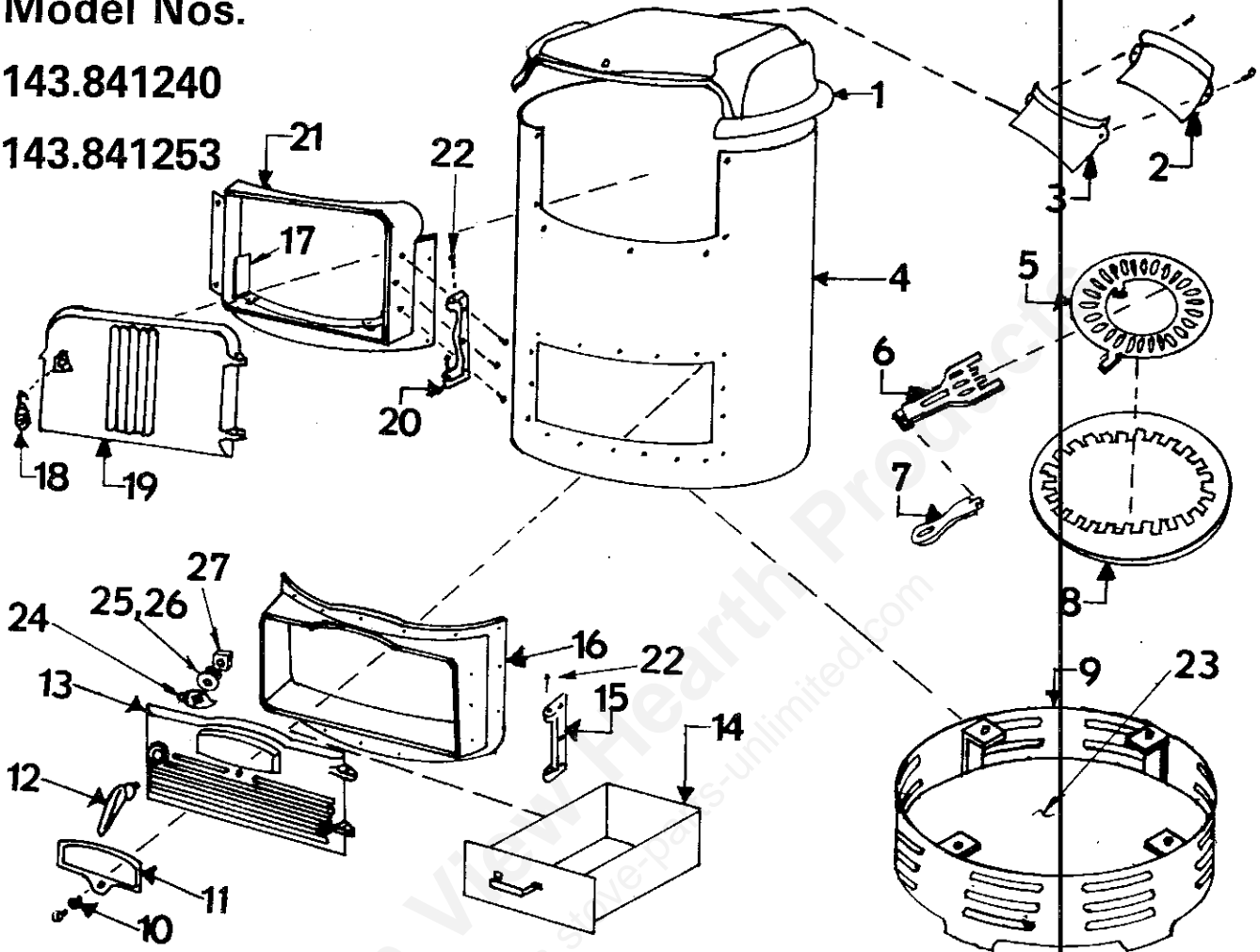
1. The top of the chimney should extend at least 3 feet above where it passes through the roof. It should also be at least 2 feet higher than any point of the roof within 10 feet (Fig 4).
2. The heater chimney should have no other appliances attached to it. Seal all unused openings and the clean-out door at the chimney base.
3. The draft or "drawing" of the heater is fully dependent on the chimney. A chimney must be high enough and warm enough to provide draft. Adding chimney height should improve draft.
4. The stovepipe may be pushed into the chimney too far, stopping the draft (Fig 5).
5. Do not connect two heaters into the same chimney flue.
6. 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.
7. 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. Increase the chimney or flue height so that it extends 2 feet above the roof peak.

# repair parts - Sears Radiant Coal Heater

Model Nos.

143.841240

143.841253



Key No.	Part No.	Description
1	40040	Main Top
2	40041	Collar Section, Back
3	40042	Collar Section, Front
4	67248	Body (Model No. 143.841240)
4	67247	Body (Model No. 143.841253)
5	40043	Round Grate
6	40044	Draw Grate
7	40045	Shaker
8	40046	Brick Support Ring
9	21205	Skirt Base
10	89102	Draft Slide Spring
11	21215	Ash Pit Draft Slide
12	40047	Ash Pit Door Handle
13	40048	Ash Pit Door
14	67245	Ash Pan
15	40049	Ash Door Hinge

Key No.	Part No.	Description
16	40050	Ash Pit Front
17	40051	Brick Support Front
18	89001	Wire Handle
19	40052	Feed Door
20	40054	Feed Door Hinge
21	40053	Feed Door Frame
22	83117	Hinge Pin (4 Req'd)
23	21696	Floor Shield
24	40086	Ash Door Handle Catch
25	—	**Spacer
26	83181	**Flat Washer 5/16" I.D., 3/4 O.D.
27	83109	**Nut 1/4 - 20 SQ.
*	89110	Brick, Large (16 Req'd for Model 143.841240)
*	89110	Brick, Large (9 Req'd for Model 143.841253)
*	89101	Brick, Small (2 Req'd for Model 143.841240)
*	89101	Brick, Small (7 Req'd for Model 143.841253)
*	21214	Brick Support Post (3 Req'd)
*	85120	Owners Manual (F642-16979)

\* Not Illustrated

\*\* Standard Hardware - May Be Purchased Locally

Sears

owners  
manual

**Model No.**  
**143.841240**  
**143.841253**

HOW TO ORDER  
REPAIR PARTS

TELL SEARS YOU  
WANT IT INSTALLED  
THEN RELAX

# RADIANT COAL HEATER

Now that you have purchased your Radiant Coal 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** of your Radiant Coal Heater will be found on a plate mounted on the back of the heater.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

- PART NUMBER
- PART DESCRIPTION
- MODEL NUMBER
- NAME OF ITEM

All parts listed may be ordered from any Sears Service Center and most Sears stores.

If the parts you need are not stocked locally, your order will be electronically transmitted to a Sears Repair Parts Distribution Center for 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.