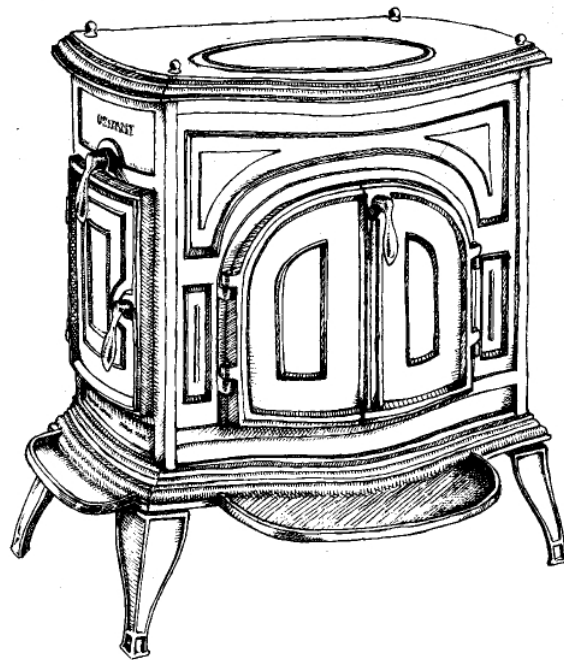
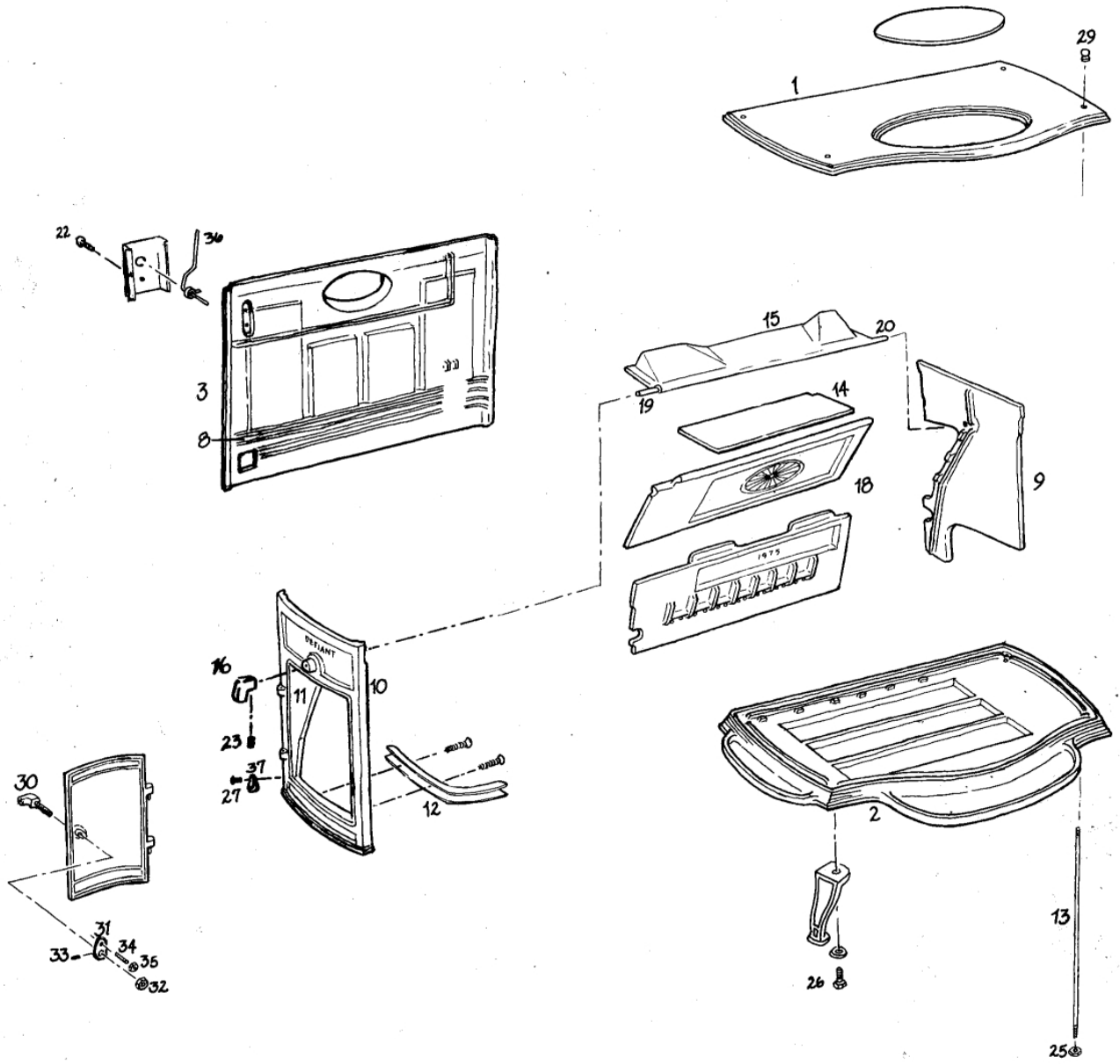


DEFIANT: FROM TOP TO BOTTOM AND BACK AGAIN



This manual contains complete instructions for the disassembly and the assembly of your Defiant woodstove.

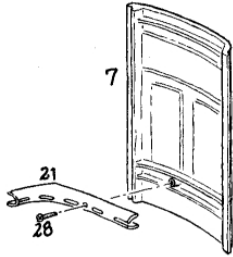
EXPLODED VIEW OF DEFIANT WOODSTOVE



INVENTORY LIST

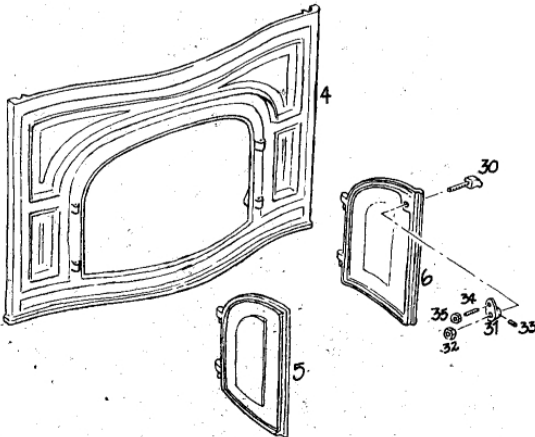
STOVE PARTS

- | | |
|----------------------|---|
| 1 Top and Griddle | 13 Tie Rods |
| 2 Bottom | 14 Smoke Shelf |
| 3 Back | 15 Damper |
| 4 Front | 16 Damper Handle |
| 5 Left Front Door | 17 Front Door Handle |
| 6 Right Front Door | 18 Upper and Lower Firebacks |
| 7 Right End | 19 Damper Pin |
| 8 Secondary Air Tube | 20 Damper Pivot |
| 9 Baffle | 21 Extension of the
Secondary Air Tube |
| 10 Left End | |
| 11 Smoke Deflector | |
| 12 Primary Air Tube | |



NUTS AND BOLTS

- | | |
|--|--|
| 22 10-24x1½" Truss Head | |
| 23 5/16" - 18 x 5/16" Allen Set Screws | |
| 24 ¼ - 20 x 1¾ Flathead Machine Self-Tap Screw | |
| 25 ¼ - 28 Hex Nuts | |
| 26 3/8 - 16 x 1" Hex Head Cap Screw and 3/8" Leg Bolt Washer | |
| 27 10 - 24 x ¾" Truss Head Screw and Spring | |
| 28 ¼ - 20 x 1½" Flathead Machine Self-Tap Screw | |
| 29 Finial Nut | |
| 30 Insert Handle | |
| 31 Pawl | |
| 32 3/8 - 16 Locknut | |
| 33 ¼-20x¼" Allen Set Screw with knurled cup point | |
| 34 ¼ - 20 x 1" Allen Set Screw with oval point | |
| 35 ¼ - 20 Hex Nut | |
| 36 Thermostat Assembly | |
| 37 Secondary Air Inlet Cover | |



Rebuilding your Defiant wood stove is a challenging but not difficult task. Please read through the instructions thoroughly to become familiar with the procedure. Refer to the exploded view diagram for identification of the components.

This manual is divided into the following three procedures:

Disassembly of stove Page 5

Assembly without cement Page 7

Permanent Assembly Page 7

All instructions given are looking at the front of the stove.

It is important to assemble the stove without cement first to make sure all the parts fit. You may notice minor design changes between some of your stove parts, the exploded view stove parts, and some replacement parts. No functions have been altered with these changes, but you may need to grind new parts slightly to fit your stove. Be sure to wear protective eye glasses and a particle mask for safety.

It may be helpful to have someone assist you as the cast iron stove parts are quite heavy. If you are disassembling and rebuilding your Defiant alone, an adjustable pipe clamp or a wooden bridge cut to the dimensions diagrammed on Fig. 1 will stabilize the front and back plates during the disassembly and assembly procedures.

Be sure to set aside a good block of time to reassemble the stove with cement. The furnace cement can lose its pliability if exposed to the air for a long period of time.

If you have any questions, please feel free to contact the Warranty Department at (802)728-3181.

TOOLS NEEDED:

- | | |
|-----------------|--------------------|
| Old Clothes | Work Gloves |
| Pipe Clamp | Wire Brush |
| Chisel | Putty Knife |
| Caulking Gun | Protective Eyewear |
| Vise Grips | Large Screwdriver |
| Penetrating Oil | Particle Mask |
| | Grinder or File |

MATERIALS PROVIDED:

- 3 11 oz. Caulking Tubes of Furnace Cement
- 4 Defiant Tie Rods with caps and nuts
- 1 Touch-Up Paint
- 1 Metal Screen, 1 1/4" x 24"
- 2 1/4-20x1 3/4" Self-Tapping Screws for Primary Air Tube

- 5/32" Allen Wrench for Damper Handle
- 1/8" Allen Wrench for Loading Door Handle
- 9/16" Socket or Open End Wrench
- 7/16" Socket or Open End Wrench
- Large Phillips Screwdriver
- 1/2" x 1" x 36" Board
- 10 ft. 1/2" Rope
- Industrial or old Vacuum Cleaner
- Blocks of wood or cement to support stove off floor
- *Dead Blow Hammer or Hammer and Block of Wood
- Smoke Deflector Tool and Instructions if not replacing Left End.

*Cast iron should never be struck directly with a metal hammer.

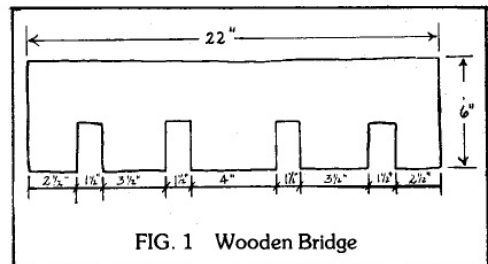


FIG. 1 Wooden Bridge

DEFIANT DISASSEMBLY

STEP 1 PREPARATION

Remove all insulating sand or ashes in the bottom of the stove.

Remove the griddle, front and loading doors, damper handle, thermostat assembly, and all accessories from the stove.

Remove the damper handle using the Allen wrench.

Disconnect the stove from the chimney.

Transfer the stove to a suitable working space.

Lift or raise the stove onto a stand of wood or cement blocks with legs just off the floor.

Remove the legs using 9/16" socket or open end wrench.

Tie a rope securely around the middle of the stove.

STEP 2 LOOSEN EXTERIOR CASTINGS

NOTE: WHEN REMOVING PLATES THAT ARE CEMENTED TOGETHER, ALWAYS USE A RUBBER Mallet OR BLOCK OF WOOD AND HAMMER. DO NOT HAMMER ON ANY CASTING WITH A METAL HAMMER.

Break Tie Rods by gripping the finial nuts on the Top Plate with the vice grips in a vertical position and rocking them back and forth. Tie Rods will fall through the bottom of the stove; you will have to bend them to remove them from the stove.

Hammer upwards on the corners and edges of the Top Plate until it loosens. Remove Top Plate.

Remove the nickel plated Loading Door Handle and Secondary Air Tube Cover, which will be installed on the New Left End provided.

Remove the Primary Air Tube on the Left End using penetrating oil and Phillips Screwdriver. Rap the Phillips Screwdriver with a hammer to loosen the screws. (New bolts are supplied with the materials, so you can break the old bolts if necessary.)

Loosen the Left End by hammering outward along the top edge.

Lift Damper out.

Lift Smokeshelf out.

NOTE: For Fireback replacement, remove only Left End. Go to Step 3.

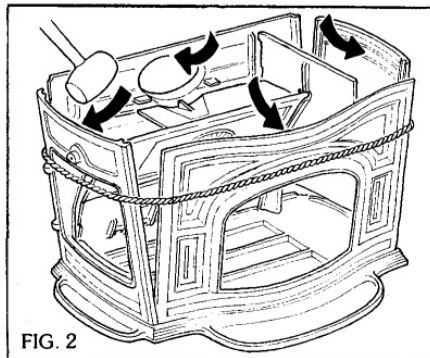


FIG. 2

Loosen Front, Back and Right End castings by hammering outward along the top edges of the castings. (FIG. 2)

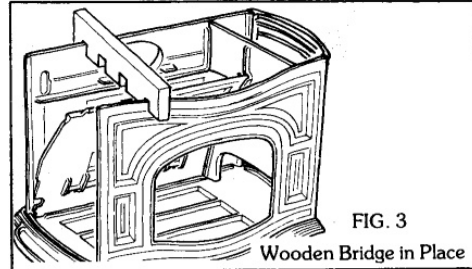
STEP 3 REMOVE EXTERIOR CASTINGS

Remove Left End. The Smoke Deflector will fall out.

Use wooden bridge to hold Front and Back castings in place. (FIG. 3).

The Fireback can be loosened by inserting a large screwdriver under the lower left corner and prying upward.

Lift out Fireback. (If it seems stuck in place, you may insert the screwdriver into one of the center air ports and tap the screwdriver to the left to slide the Fireback out the open left end of the stove.)



NOTE: The following steps are **not necessary** for Fireback replacement. All other castings can be left in place.

Remove Right End Plate. The Air Tube can be left in place.

Lift out Baffle.

Remove wooden bridge and rope.

Remove Front Plate.

Remove Back Plate.

YOU HAVE NOW COMPLETED THE DISASSEMBLY OF YOUR DEFIANT.

CLEANING At this time, cast plates must be thoroughly cleaned of all furnace cement and ash. Pay particular attention to the channels, using hammer and chisel or screwdriver. Wire brush all channels to remove fine pieces of cement. If you are replacing the Fireback and have left the Right End, Front, Back, and Right Baffle in place, it is helpful to use a vacuum cleaner to remove dust and particles from the castings and stove bottom.

DEFIANT ASSEMBLY

Lay all the parts out on the floor in sequence. We recommend that you assemble the stove once **without cement** to make sure all the parts fit. New parts may have to be ground or filed.

All instructions in italics concern cementing or steps for the permanent assembly. Follow non-italicized instructions for the dry assembly.

NOTE: For fireback replacement, begin at STEP 5.

STEP 4 ASSEMBLE EXTERIOR CASTINGS

On the inside of the Bottom Plate, place pieces of masking tape over the leg bolt holes to prevent them from filling with furnace cement during assembly.

Cement all four channels in the Bottom Plate (FIG. 4).

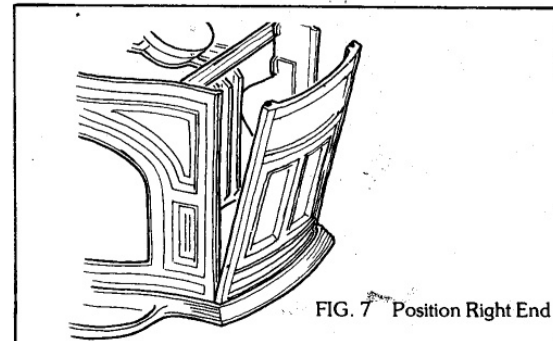
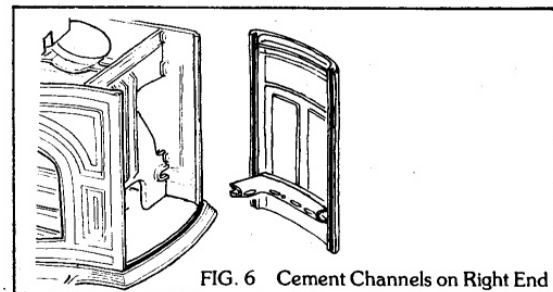
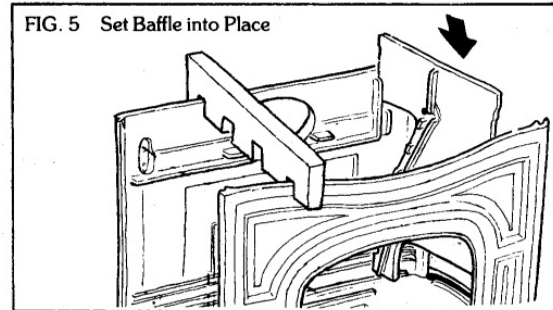
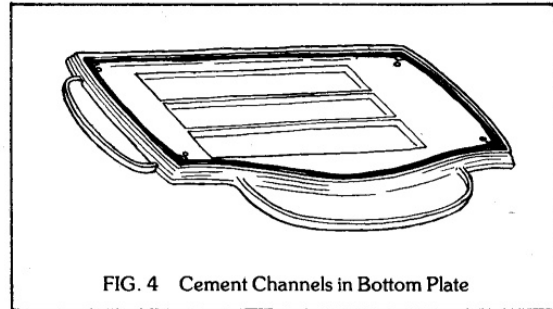
Set the Front Plate in the front channel of the Bottom Plate.

Set the Back Plate in the back channel of the Bottom Plate. Hold in place with the wooden bridge.

Set the Right Inside Baffle to fit in place between the Front and Back Plates. You may need to adjust the bridge (FIG. 5).

Cement the channels on the sides of the Right End Plate. (FIG. 6)

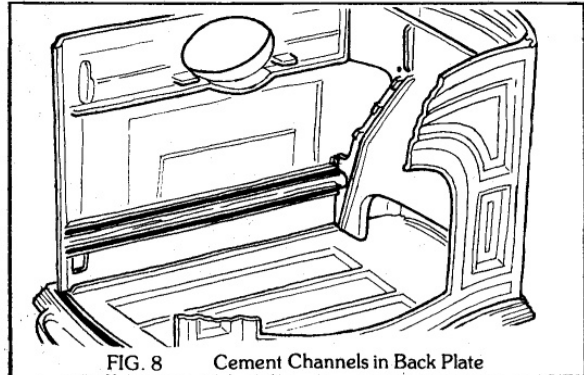
Set **Right End** with the Air Tube attached in place, sliding the channels in the End over the edges of the Front and Back Plates (FIG. 7). Move the wooden brace so that the two center slots fit over the Baffle and Right End. The channels in the Right End hold the Front and Back Plates in place.



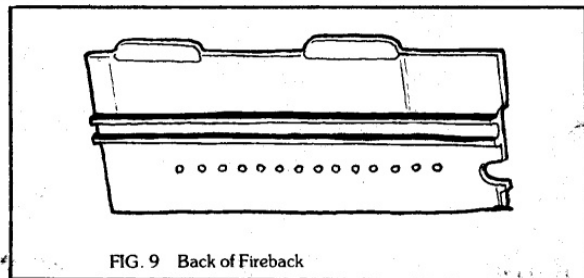
STEP 5 FIREBACK AND SECONDARY AIR TUBE INSTALLATION

On the inside of the Back Plate, there are two ribs which make up half of the Secondary Air Tube (See FIG. 11 below).

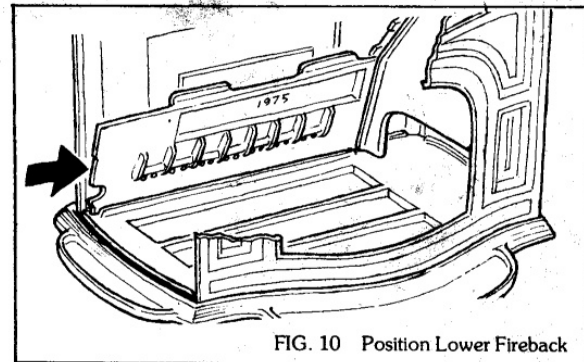
Cement along the top of the upper rib and the front of the lower rib on the Back Plate (FIG. 8).



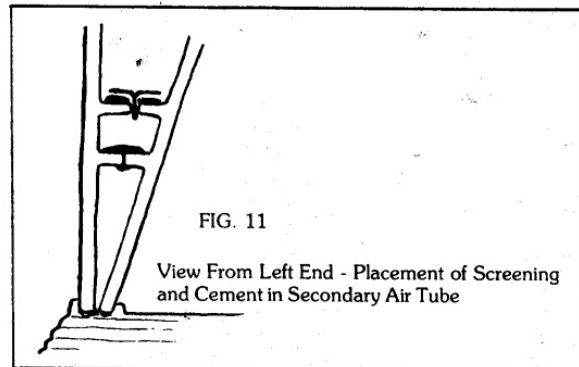
Cement the edges of the two ribs on the Lower Fireback (FIG. 9).



Place Lower Fireback into position, butting it up against the Baffle (FIG. 10). Make sure that all cement on the Lower Fireback comes in contact with cement on the ribs of the Back Plate. The cement will seal the upper and lower ribs, forming the Secondary Air Tube.



Lay 24" screen, supplied with materials, on the Top Rib as pictured (FIG. 11). Press the screen into the cement so the extension of the "T" fits between the top ribs of the Back Plate and the Fireback. Add more cement to make a tight seal. You can use the putty knife as a paddle to smooth the cement along the top of the Secondary Air Tube. Run the 1/2" x 1" x 36" piece of wood inside the Secondary Air Tube to smooth the layer of furnace cement and clear the channel.



STEP 5 FIREBACK INSTALLATION, CONT.

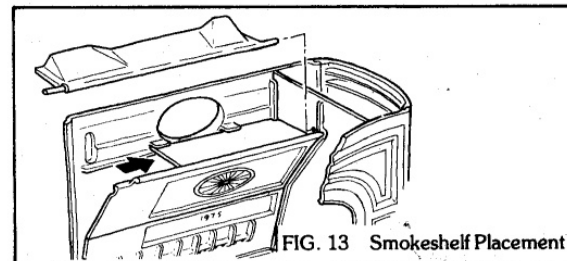
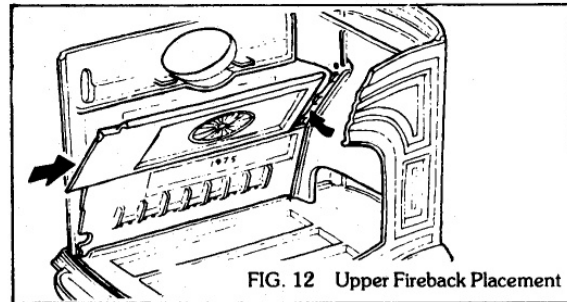
Set the Upper Fireback in place, making sure all tabs overlap those on the Lower Fireback (FIG. 12). You do not need to cement between the Upper and Lower Firebacks.

Tap the lower right corner of the Upper Fireback to persuade it into the channel on the Baffle.

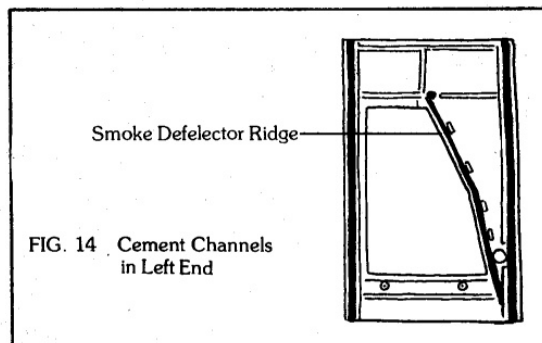
Gently hammer Upper Fireback to the right into place.

Set Smokeshelf in place on tabs on the Back Plate and along the Upper Fireback. The cutout corner of the Smokeshelf should be placed in the back right corner, where the Right Baffle meets the Back Plate (FIG. 13). Do not use cement.

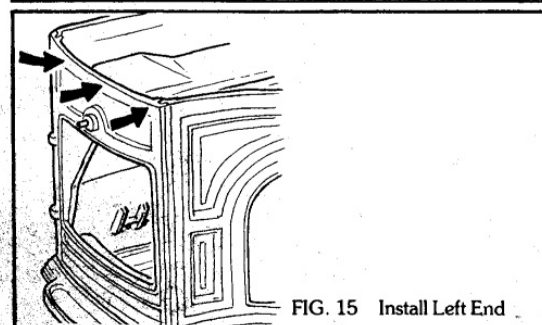
Install the Damper so that the Right Damper Pin is in the hole in the Baffle.



STEP 6 INSTALL THE LEFT END



Cement channels on Left End Plate as indicated (FIG. 14).



Install the Left End Plate, allowing the left damper pin of the Damper to go through the hole above the Side Loading Door opening (FIG. 15).

Make sure the Firebacks are behind the Smoke Deflector Ridge (see FIG. 14). Also, check that there are no burrs of cast iron behind that ridge. In older stoves, the new Firebacks may be slightly too long. Grind, if necessary, along the left edge of the Upper and Lower Firebacks.

Hammer along the top edge of the Left End Plate until it is set in place. Check that the Damper opens and closes smoothly and easily. You may have to grind the recess in the upper left corner of the Upper Fireback, which allows for the rotation of the Damper.

If you are rebuilding your stove using the original Left End, you will now have to replace the Smoke Deflector. Refer to separate instructions provided by the Warranty Department for this procedure.

STEP 7 INSTALL TOP PLATE

Place cement in the four channels on the Top Plate (FIG. 16).

Install the Top Plate. Hammer the upper side and corners of the exterior plates until the Top Plate sets down over them.

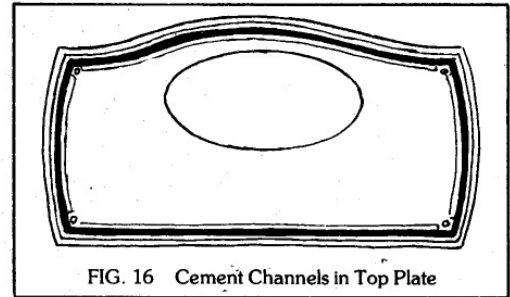


FIG. 16 Cement Channels in Top Plate

THIS COMPLETES THE DRY ASSEMBLY —
You can now break down the stove and return to
STEP 4 for the permanent assembly with cement.

STEP 8 INSTALL THE TIE RODS

Screw the Finial Nuts on the four Tie Rods.

To install the Left Rear Tie rod, you may have to bend it very slightly at a point about a third of the way up from the bottom of the rod.

Guide the rod down from the Top Plate through the Bottom Plate. You can see it through the Primary Air Tube hole in the lower left hand corner of the Lower Fireback. Rotate the Tie Rod to line it up with the hole in the Bottom Plate, and it will slide through.

Install the other three Tie Rods by dropping them through each hole in the Top Plate and by reaching inside with one hand to line rod up with the hole in the Bottom Plate (FIG. 17).

Using cardboard to protect the Finial Nuts, hold them with vice grips or pliers and screw the hex nuts onto the bottom of the Tie Rods.

Tighten the Tie Rod Nuts; hammer the outside corners of the Top and Side Plates to insure that they are in place. Tighten the Tie Rod Nuts again.

Break excess Tie Rod off at the bottom, just below the hex nut, by wrenching back and forth with the vice grips. Otherwise, the rod prevents the legs from being attached.

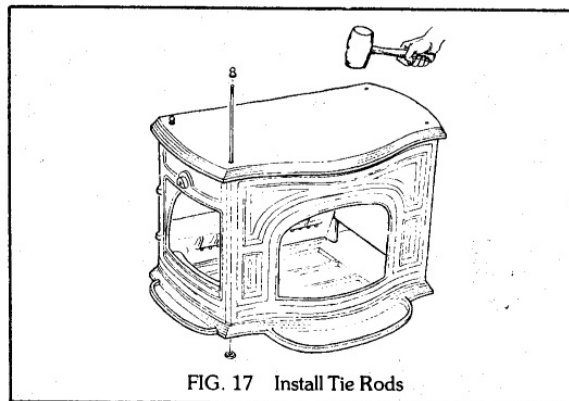


FIG. 17 Install Tie Rods

STEP 9 FINISHING

Screw the Primary Air Tube on the new Left End Plate using the new 1/4-20 x 1" self-tapping screws provided.

Smooth furnace cement in outside seams of the stove with your finger or a putty knife.

Remove all excess cement from the outside of the stove with warm water and sponge.

Repaint stove with paint provided.

Reattach hardware: Load Door Handle, Secondary Air Tube Cover, Damper Handle, Thermostat Assembly.

Replace Legs, Doors, and Griddle.

Reline the bottom with a 1 1/2" layer of sand or ash to insulate it against excess heat.

REMEMBER: YOU MUST BUILD EIGHT TO TEN SMALL BREAK-IN FIRES WITH THE DAMPER OPEN TO TEMPER THE CAST IRON REPLACEMENT PARTS IN YOUR STOVE.

DEFIANT: FROM TOP TO BOTTOM AND BACK AGAIN

VERMONT CASTINGS, INC.

UPDATE

PRINCE ST. RANDOLPH, VT.
05060

Changes in the design of some of the replacement interior castings modifies your Defiant so it shares service characteristics with other Vermont Castings stoves. After the rebuild procedure has been completed, you will be able to remove all interior parts without taking the outside of the stove apart. This will make cleaning the baffle system behind the fireback, and replacing interior wear parts much more convenient.

Most of the information in the manual, "Defiant: From Top to Bottom and Back Again", may still be used. This Update will inform you of changes in parts and procedures.

Become familiar with all the parts of your stove by examining the Exploded View on pages 2 and 3 of the manual. Part #9 (Baffle) and Part #21 (Secondary Air Tube Extension) have been changed for the replacement kit, and a new piece (Support Leg) has been added. See Figure A.

Page 4 of the manual contains important general information and safety notes (Wear a particle mask and protective eyewear). Please read this carefully.

DEFIANT DISASSEMBLY

Follow the directions on pages 5 and 6 of the manual to take your Defiant completely apart. Disregard the NOTE at the bottom of page 5 and the NOTE in the middle of page 6.

DEFIANT EXTERIOR ASSEMBLY

The order for assembling the modified replacement parts is different from what is shown in the manual. Please follow these instructions for the DEFIANT ASSEMBLY procedures.

Thorough cleaning of previously used parts is a requirement. A dry assembly (without using furnace cement) is highly recommended. It may be necessary to re-clean old parts or grind new parts to insure that all parts fit together correctly. Parts covered with wet furnace cement are hard to work with.

When it is time for permanent assembly, follow the cementing instructions as shown in Figures 4, 6, 14, and 16 of the manual.

The exterior castings of the stove will be completely assembled before any interior parts are installed.

- 1) Remove the Secondary Air Tube Extension from the Right End and either discard it or save it as replacement for the Primary Air Tube if it should be necessary.
- 2) Follow the instructions on page 7 of the manual for assembling the exterior castings but do not put the Baffle in place. The new Secondary Air Tube Extension will be re-installed on the Right End later in the procedure.
- 3) Install the Left End as illustrated in Figures 14 and 15 on page 9 of the manual. Install only the Left End at this time. Interior parts will be installed later in the procedure.
- 4) Install the Top Plate and Tie Rods as shown in Steps 7 and 8 on page 10 of the manual.

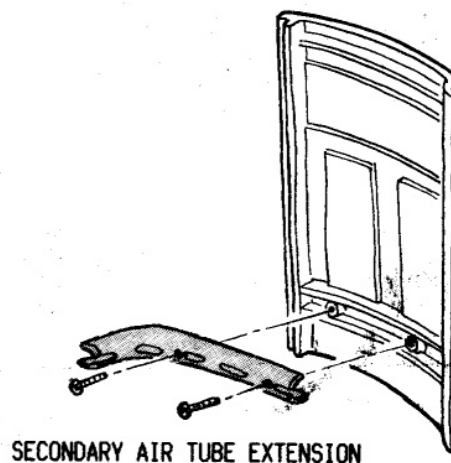
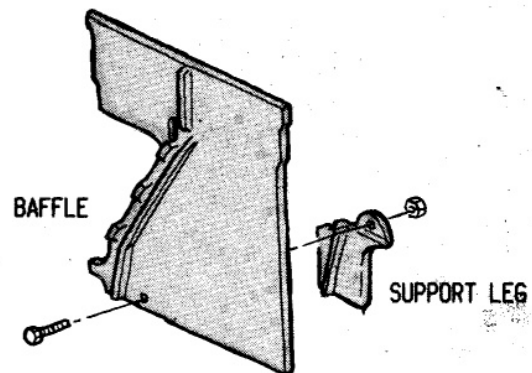


Fig. A Modified and New Replacement Castings

DEFIANT INTERIOR ASSEMBLY

Install the interior parts of your Defiant in the following order.

- 1) Refer to Step 5 on pages 8 and 9 of the manual for instructions on installing the Upper and Lower Fireback. You will notice differences from the illustrations.
 - * The Left End is in place, and the Baffle is not
 - * The Upper and Lower Firebacks will be seated by tapping them to the left (to seat them against the Left End) rather than to the right (to seat them against the Baffle).
 - * A tie rod instead of a 1/2" x 1" board will be used to smooth the cement on the inside of the Secondary Air Tube.
 - * The Smokeshelf must be installed as you move the Upper Fireback into position. See Figure 13 on page 9 of the manual for the correct placement of the Smokeshelf.
- 2) Place the Damper in position resting on the Smokeshelf with the Damper Pin on the left end of the Damper passing through the left end of the Defiant.
- 3) Position the Baffle in the stove with the front edge seated in the vertical groove (formed by a ridge and three tabs) just to the right of the door opening, and the rear edge against the side of the stove. Figure B

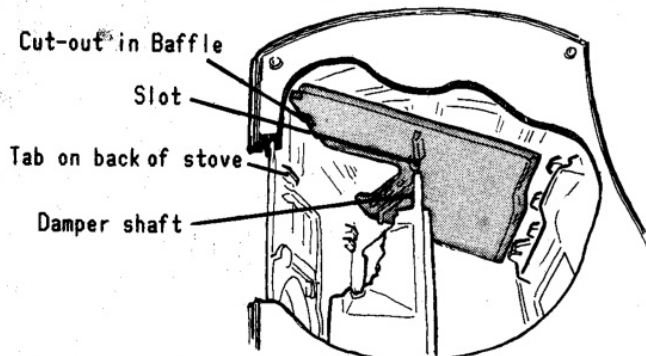
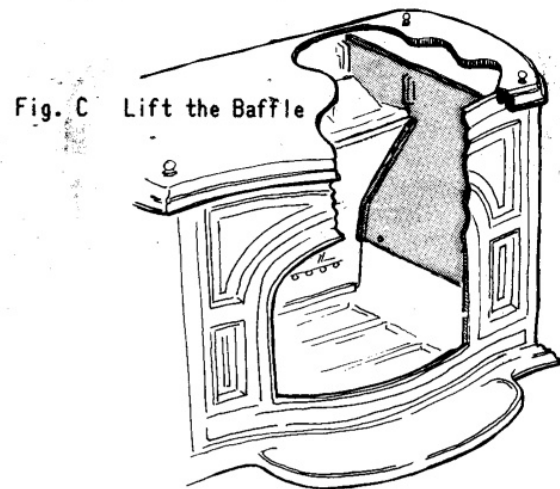


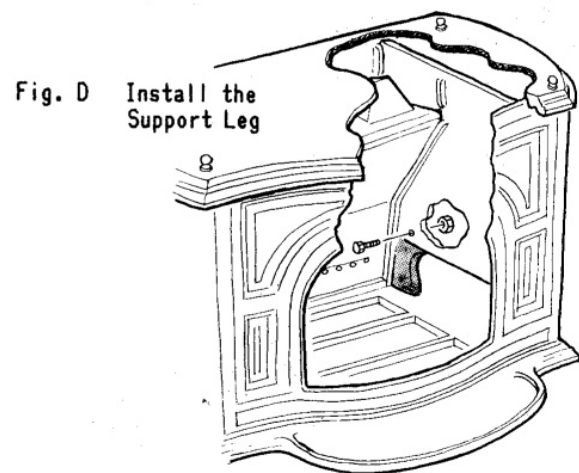
Fig. B Position the Baffle
(Bird's Eye View)

- 4) As you swing the rear edge of the Baffle toward the center of the stove:
 - * Position the Damper so the shaft on the right end of the Damper passes through the slot at the top of the Baffle.
 - * The tab to the rear of the bottom of the Baffle slides along the Secondary Air Passage on the back of the stove.
 - * The cut out at the rear of the top of the Baffle clears the tab on the back of the stove. The cut out may have to be slightly enlarged to clear the tab.
 - * It may be necessary to pull the top right hand end of the Upper Fireback forward so that it will seat properly against the Baffle

- 5) Lift the Baffle straight up about 1". The top rear corner of the Baffle will slide into a groove on the back of the stove. If you have difficulty lifting the Baffle up, check to be sure the slot in the back of the stove is clear of any soot or creosote, and make sure the top of the Baffle lines up with the slot. Figure C



- 6) Position the Support Leg under the rear of the Baffle, against the Lower Fireback. Secure it to the Baffle with a 1/4 x 20 hex head bolt and hex nut. Figure D



- 7) To install the new Secondary Air Tube Extension, place the back end of the tube in position in the secondary combustion chamber against the Support Leg and Baffle, and then swing the front of the tube against the side of the stove. Screw the Secondary Air Tube Extension to the Right End with two 1/4 x 20 x 1 1/2" Flathead Screws.
- 8) Refer to Step 9 on page 11 for instructions on finishing the rebuilding procedure.
- 9) Pay attention to the note on page 11, entitled "REMEMBER".