



Defiant: From Top to Bottom and Back Again

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

Inventory List

(Refer to illustration on Page 7)

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. 10-24 x 1 1/2" Truss Head
23. 5/16" - 18 x 5/16" Allen Set Screws
24. 1/4-20 x 1 3/4" Flathead Machine Self-Tap Screw
25. 1/4-28 Hex Nuts
26. 3/8 - 16 x 1" Hex Head Cap Screw and 3/8" Leg Bolt Washer
27. 10-24 x 3/4" Truss Head Screw and Spring
28. 1/4-20 x 1 1/2" Flathead Machine Self-Tap Screw
29. Acorn Nut
30. Insert Handle
31. Pawl
32. 3/8 - 16 Locknut
33. 1/4-20 x 1/4" Allen Set Screw w/Knurled Cup Point
34. 1/4-20 x 1" Allen Set Screw w/Oval Point
35. 1/4-20 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 2
- Assembly Without Cement..... Page 3
- Permanent Assembly Page 3

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 the Defiant alone, an adjustable pipe clamp or a wooden bridge cut to the dimensions diagrammed in Figure 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 800-525-1898.

Tools needed:

- Old clothes
- Pipe Clamp
- Chisel
- Caulking gun
- Vise grips
- Penetrating oil
- Grinder or file
- 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. of 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

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, 1¼" x 24"
- 2 1/4-20 x 1¼" Self-tapping screws for primary air tube

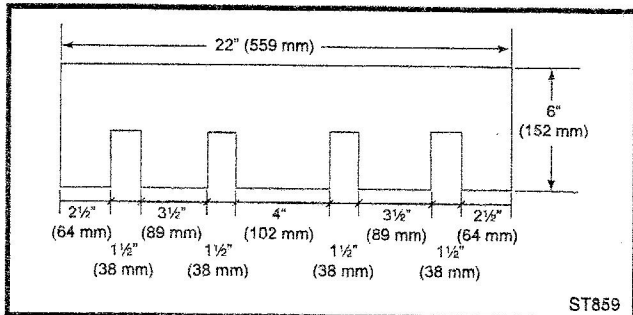


Fig. 1 Wooden bridge.

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 work 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 acorn 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 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 smokesheff out.

NOTE: For fireback replacement, remove only left end. Go to Step 3.

Loosen front, back and right end castings by hammering outward along the top edges of the castings. (Fig. 2)

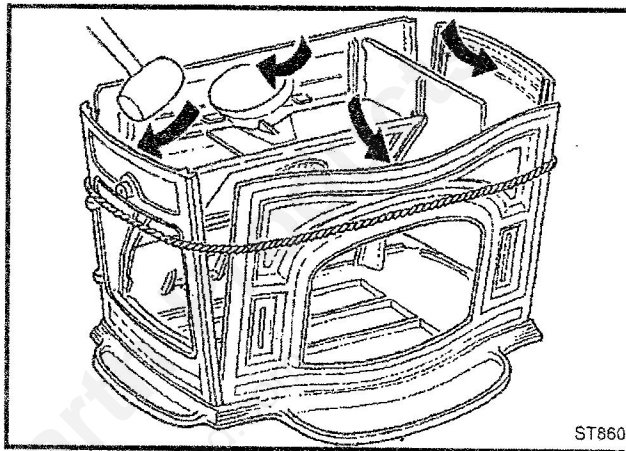


Fig. 2 Loosen front, back and right end castings.

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)

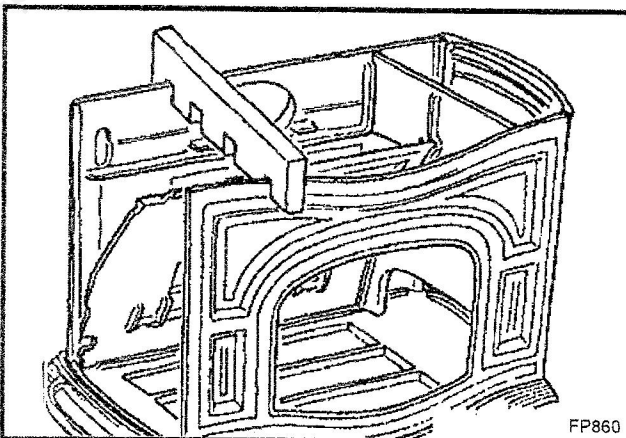


Fig. 3 Wooden bridge in place.

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

Lift out the 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 of 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 the 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.

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)

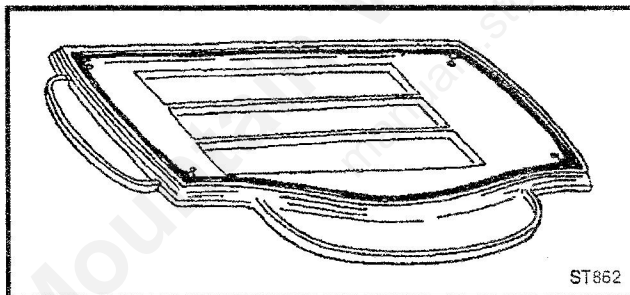


Fig. 4 Cement channels in bottom plate.

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)

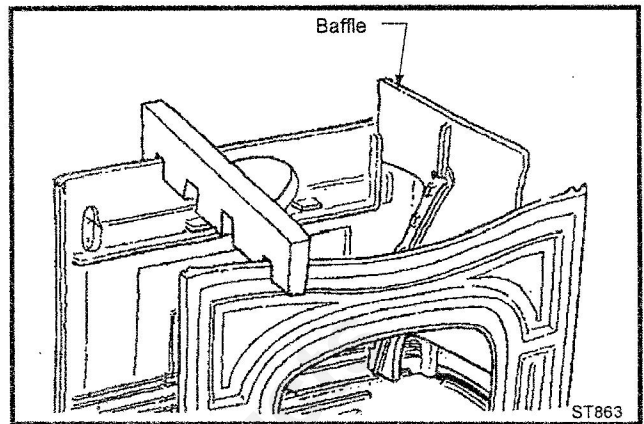


Fig. 5 Set baffle in place.

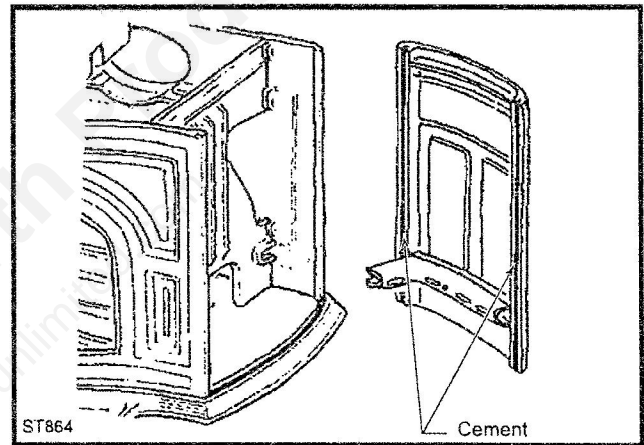


Fig. 6 Set baffle in place.

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 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.

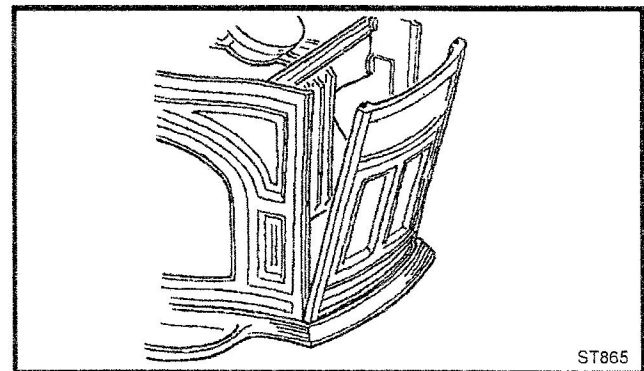


Fig. 7 Position right end.

Step 5 Fireback and Secondary Air Tube Installation

On the inside of the back plate, there are two (2) ribs which make up half of the secondary air tube. (Fig. 11)

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)

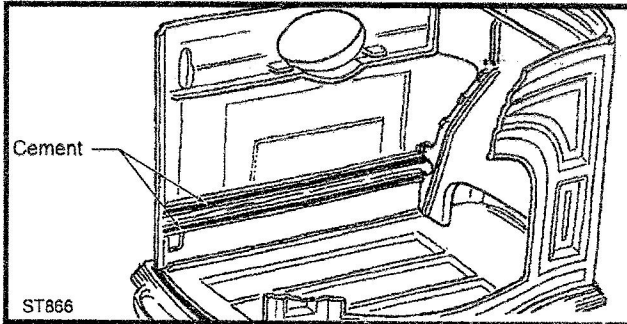


Fig. 8 Cement channels in back plate.

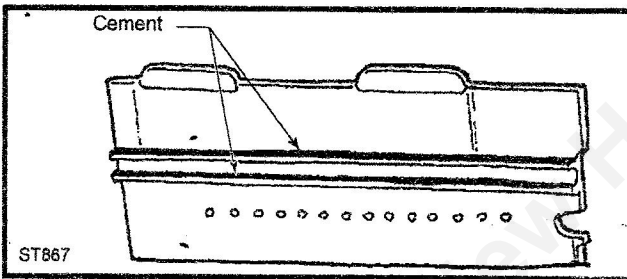


Fig. 9 Back of fireback.

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.

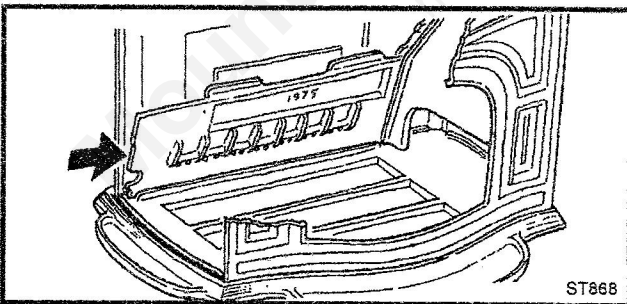


Fig. 10 Position lower fireback.

Lay 24" screen, supplied with materials, on the top rib as shown in Figure 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

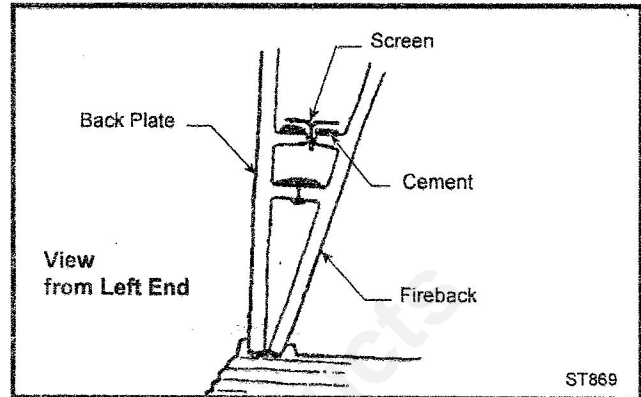


Fig. 11 Placement of screening and cement in secondary air tube.

secondary air tube to smooth the layer of furnace cement and clear the channel.

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.

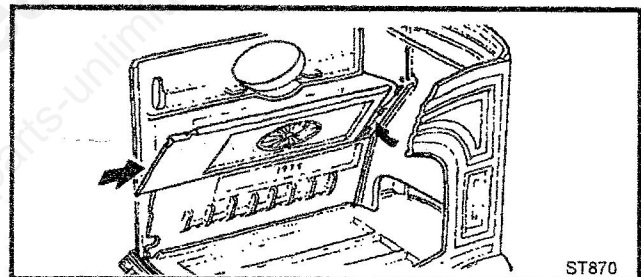


Fig. 12 Upper fireback placement.

Gently hammer upper fireback to the right into place.

Set smokesheff in place on tabs on the back plate and along the upper fireback. The cutout corner of the smokesheff 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 the right damper pin is in the hole in the baffle.

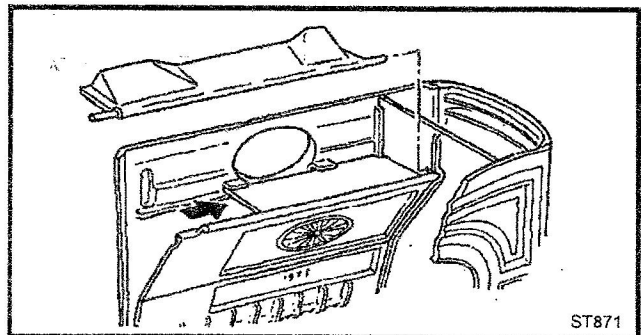


Fig. 13 Smokesheff placement.

Step 6 Install the Left End

Cement channels on left end plate as indicated in Figure 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)

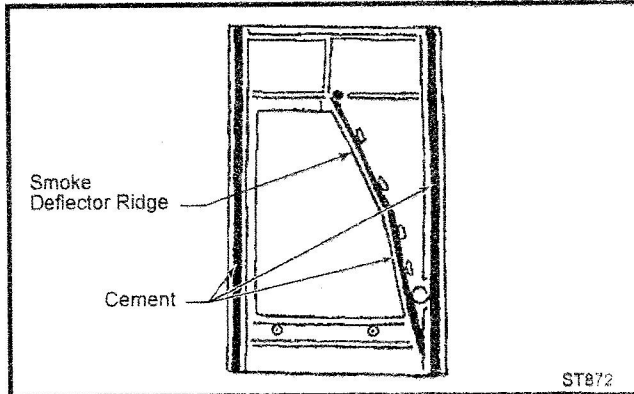


Fig. 14 Cement channels in left end.

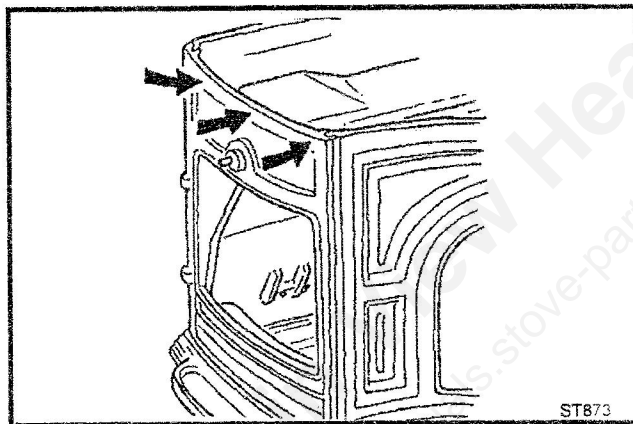


Fig. 15 Install left end.

Make sure the firebacks are behind the smoke deflector ridge. (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.

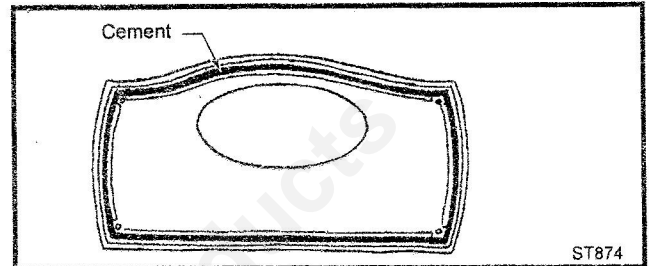


Fig. 16 Cement channels in top plate.

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 acorn 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 the rod up with the hole in the bottom plate. (Fig. 17)

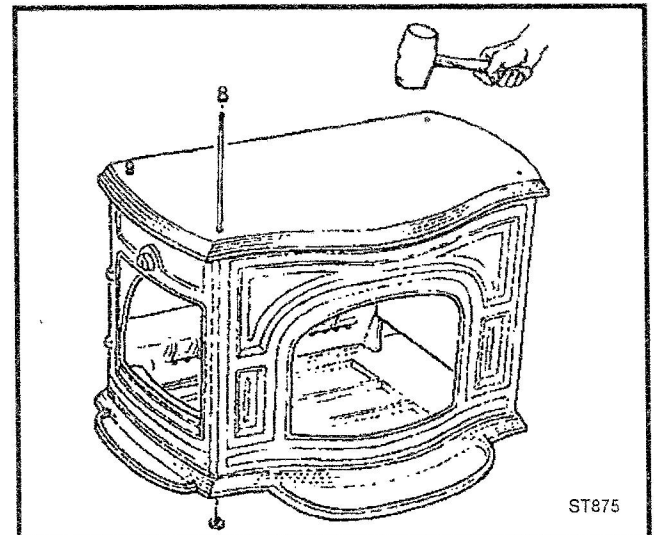


Fig. 17 Install tie rods.

Using cardboard to protect the acorn 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 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.

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 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.

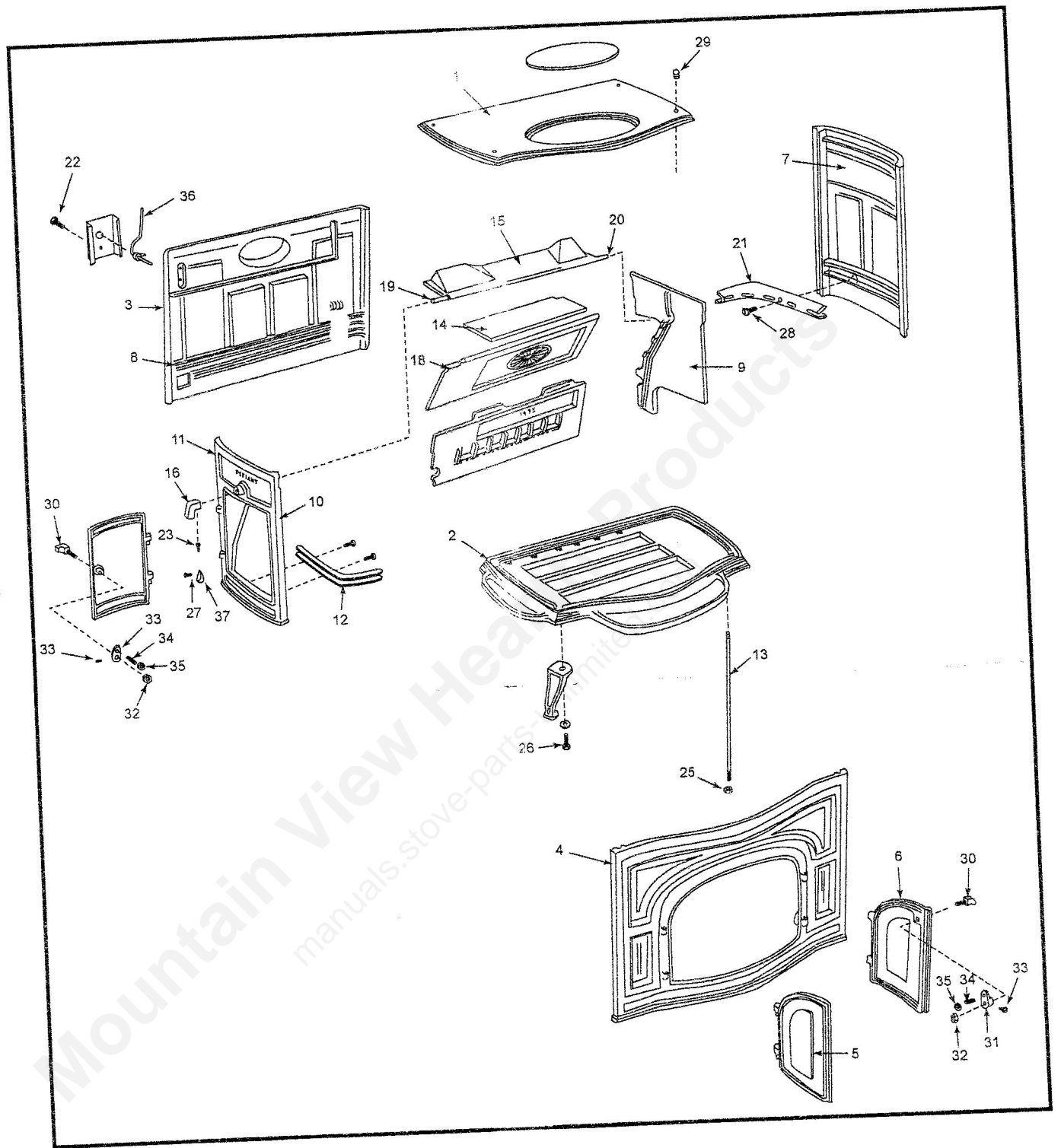
Repaint stove with paint provided.

Reattach hardware: load door handle, secondary air tube cover, damper handle, thermostat assembly.

Replace legs, doors and griddle.

Reline the bottom with 1½" 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.



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