

Dutchwest (2460, 2461, 2462) Tear Down Rebuild Instructions



Dutchwest Convection '93 Series Service Procedure

DISASSEMBLY and ASSEMBLY

1993 AND LATER DUTCHWEST CONVECTION HEATERS

Models 2460 (Small), 2461 (Large), and 2462 (Extra-Large)

HISTORY of CHANGES

In 1993, *Vermont Castings* changed the **Dutchwest stoves** to improve the stoves' appearance and clean-burn performance. The changes are:

- A single large front door, with a large piece of coated glass, instead of the earlier double-doors.
- An air wash system for the front door. This draws air in through two openings on the front, and through an air channel, which releases combustion air against the inside of the front door and through the ends of the air intake channel (at the top).
- The air inlets are steel flaps welded to a rod.
- Dropped the firescreen. The shape of the firebox changed so that there was a chance of smoke spillage with the firescreen in place.
- Dropped the coal capabilities. Instead of rocker grates, the stoves now have a flat stationary grate with drop-in 'sheaves of wheat' andirons.
- Recessed the grate back into the inner back.
- Changed the latches to the *Vermont Castings* 'pawl' type.
- Changed the handles. These stoves use gold-plated 'faucets' which stay on the stove all the time. The owner uses a 'fallaway' handle on the doors.
- In February 1994, *Vermont Castings* changed the bypass operating rods to remove the threads where the rod passes through the inner top 'horseshoe', and added clips just inside the left side of the stove to locate the rods.
- Deleted the 'air balance plate' from inside the right side, and then replaced it with a wear plate starting with April '94 production runs.
- In 2006, the gold plated accents were replaced by polished nickel accents. This included the faucet stubs, rod, and air control knob.
- In 2006, the gold fallaway handle was replaced by one with a wooden handle.
- In September of 2008, stainless steel combustors were implemented

DISASSEMBLY

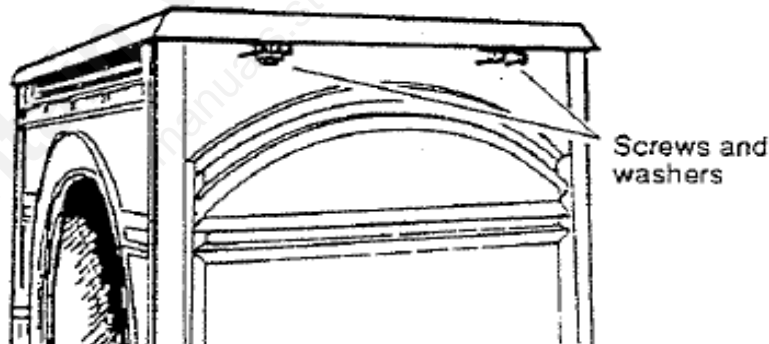
Clear a space for storing parts as you take the stove apart. You will need pliers, a 7/16" socket wrench or open-end wrench, a 5/32" Allen wrench and a Phillips head screwdriver to remove nuts and bolts and screws. You will need a dead blow hammer to dislodge parts which have been cemented together. A conventional, steel hammer and block of wood may be used in place of the dead blow hammer. Use the block of wood to protect metal parts from direct blows of the steel hammer. These directions will tell you what hardware to remove during the disassembly of your stove. Some hardware in the top and sides is for optional accessories. Do not remove this hardware unless directed to do so in the instructions for installation of the accessories.

****Wear gloves and protective eyewear.****

Instructions are given as you face the stove.

- 1. Remove and empty the ash pan. It is a handy tray for hardware.**
- 2. Lift the front door and load door from the stove.**
- 3. Remove the probe thermometer from the stove top.**
- 4. Remove the top.**

Use a 7/16" wrench to remove the four cap screws that hold the top plate to the body of the stove. The four screws pass upward through slotted tabs at the top of each side and into the underside of the top plate. Lift the top from the stove.



Remove the four screws and washers and lift the top plate from the stove

NOTE: To protect the refractory package and the catalytic combustor from damage as you work on the stove, remove these parts from the inner top. You may need to rock the catalyst gently to free it from the top.

5. Remove the hearth.

Use a 7/16" wrench to remove the two cap screws which hold the hearth in place, and remove the hearth. Remove the andirons.

6. Remove the ash door.

Pull the ash door hinge pins out, and remove the ash door.

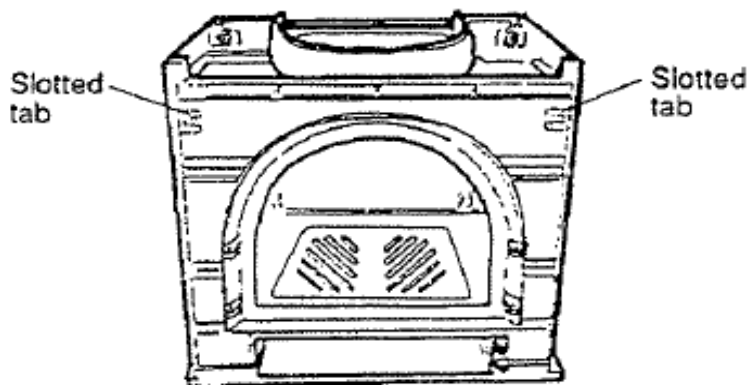
7. Remove the flue collar.

While holding the nuts that are inside the flue collar with pliers, remove the two Phillips head screws that hold the flue collar in place, and remove the flue collar. Lift out the gold bar across the top of the front.

8. Remove the front.

Threaded studs are screwed into the back of the front plate. The studs pass through slotted tabs in the side plates. Nuts screwed onto these studs hold the front to the sides of the stove. In most cases, the studs are over the inner top. On some units, the hardware is below the inner top and you will likely need a socket wrench to get at this hardware.

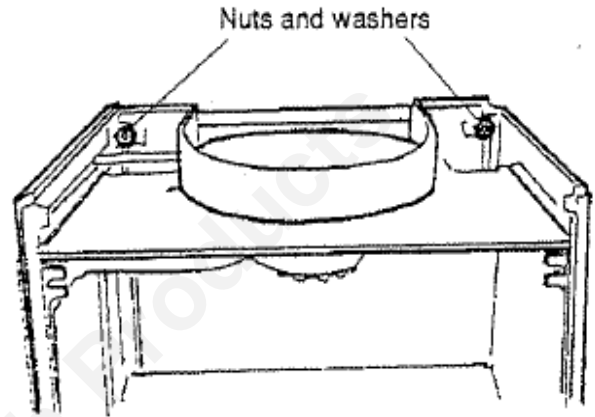
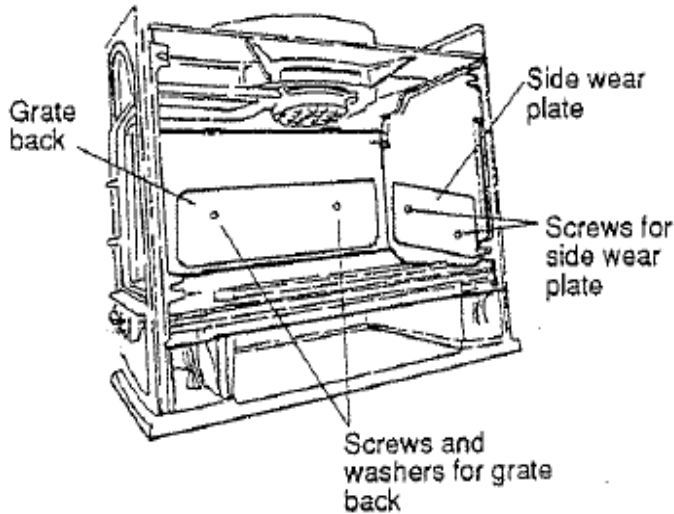
Remove the two nuts and washers, being careful to hold the front in place as you remove the last nut. Lift the front from the stove; the air intake channel will come away with the stove front. Put the front down with its outer side up, to avoid having any weight on the primary air control. Be sure to protect the surface under the front.



*Remove the nuts and washers from the studs
passing through the slotted tabs*

9. Remove the side wear plate.

Remove the two hex head bolts that hold the side wear plate to the inside of the right side plate, and remove the side wear plate. Early units do not have this wear plate.



Remove the nuts and washers and remove the back (Step 11)

*Remove the side wear plate (Step 9)
{Grate back is removed with the inner back}*

10. Remove the damper mechanism.

On early units, the damper operating rod is threaded into the side of the “horseshoe” in the inner top. Release the damper adjuster from the damper by removing the anchor bolt, which is the bolt closer to the front of the stove. There is a nut on this bolt, on the underside of the damper. Slide the damper adjuster to one side of the flue collar plate, on the stove back. Use the fallaway handle to unscrew the steel operating rod until the damper crank is released from the rod, and pull the rod out of the stove.

On later units (built after February '94), the damper operating rod has a clip and washer just inside the outer side of the stove. Remove the clip and pull the operating rod out of the side of the stove. Remove the anchor bolt and securing nut from the damper adjuster, and lift the crank and adjuster out of the stove.

NOTE: Before removing the back in the next step, brace the two sides to prevent them from falling over when the back is removed. A pipe clamp adjusted to hold the two sides together works well; you can also use rope or straps.

11. Remove the back.

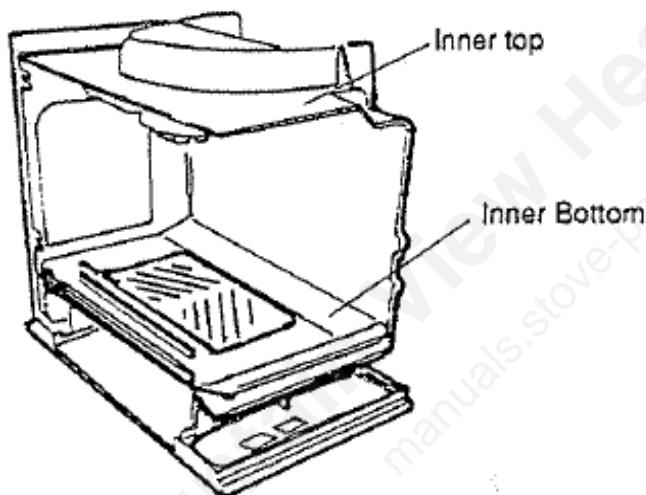
Remove the two nuts on threaded studs which hold the back to the sides, and remove the back. Before continuing with the disassembly, brace the left side so that when the right side, inner top, and inner back are removed, the left side will remain upright.

12. Remove the right side and the grate.

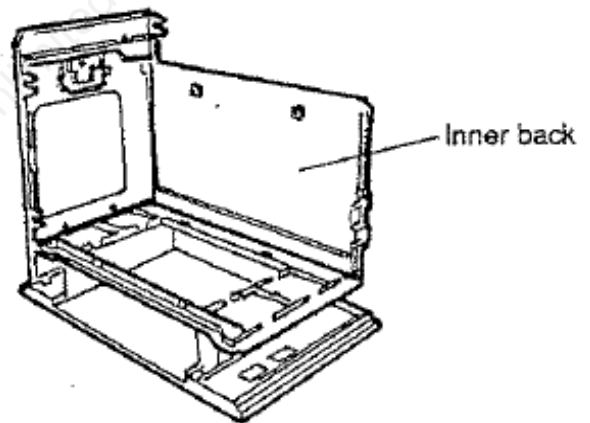
Pry the right side away from the rest of the assembly, and remove it. Lift the slotted grate from the inner bottom and set it aside.

13. Remove the inner top.

The inner top is supported by the left side and the inner back. Slide the inner top a short distance to the right, and lift it from the inner back. Place it right side up on your work surface.



Remove the inner top



After bracing the left side, remove the inner back

NOTE: If it is necessary to remove the damper, baffle, and air supply channel from the inner top, instructions are given starting with step 17 below.

14. Remove the inner back.

Be sure the left side is supported. Slide the inner back to the right and remove it from the stove. The grate back will come with the inner back.

15. Remove the left side.

Lift the left side from the stove, and set it aside.

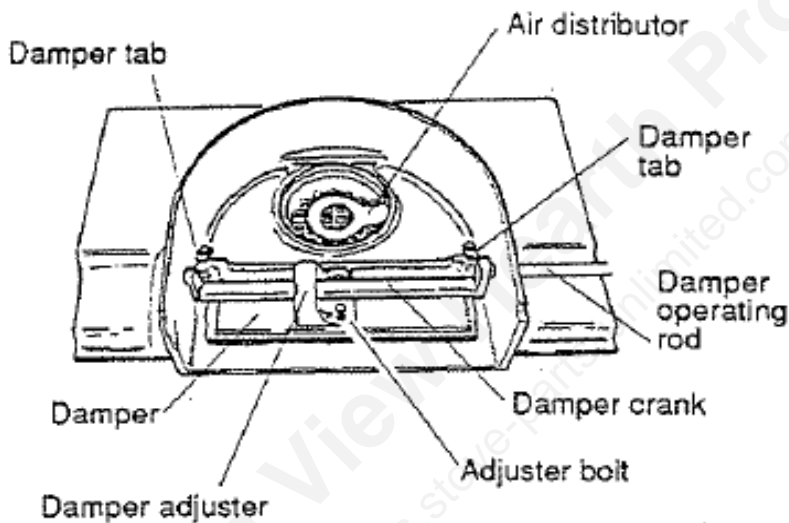
16. Remove the inner bottom.

Remove the two long bolts that hold the inner bottom to the bottom, and remove the inner bottom.

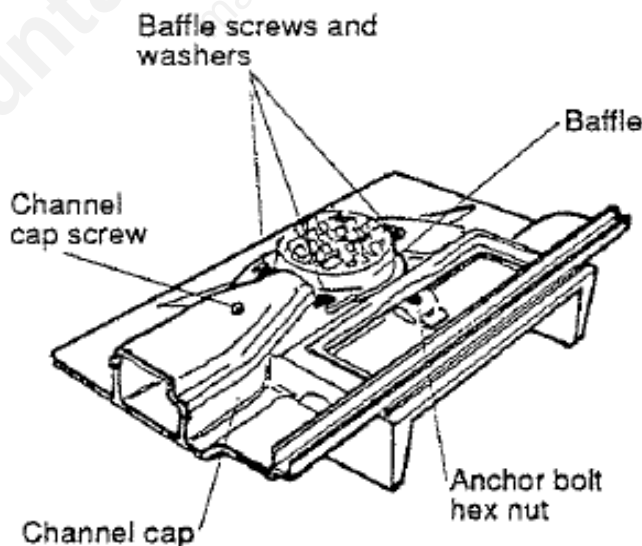
This completes the disassembly of the main components of the stove. To remove the damper, baffle and channel cap from the inner top, continue with step 17.

17. Remove small parts from the inner top.

Remove the bolts and damper tabs which hold the damper to the inner top. Lift the damper out and set it aside. Turn the inner top over and remove the hex head bolt holding the channel cap to the inner top, and remove the cap. Remove the three hex head bolts that hold the baffle to the top, and remove the baffle.



Top side of inner top



Underside of inner top

ASSEMBLY

All nuts and bolts are ¼-20 thread size unless otherwise noted. Lengths of bolts are given with the assembly instructions. Use automotive “Never-Seize” on screw threads to make future repairs easier.

Gasketing

If new parts need to be gasketed, or old parts re-gasketed, **do all of the gasketing before starting to assemble the stove.**

Instructions and illustrations are given at the end of this section of the manual.

Parts which need to be gasketed include:

- Top
- Inner top (damper opening)
- Side door
- Front door, including opening for glass
- Ash door
- Back (flue collar opening)
- Front (air manifold)

Cementing

Prepare parts which will need to be cemented before starting to assemble the stove, but **do not apply cement until just before installing the parts.** Perform a trial fit to ensure the parts fit properly together.

Cementing instructions are given below. Illustrations showing where to apply cement are given as needed in the assembly instructions.

Parts which need cementing include:

- Bottom and inner bottom
- Inner top
- Left and right sides
- Back
- Front

Prepare parts carefully so that new cement makes a tight seal between the parts to be joined. The channels and edges to be cemented must be free of old cement and dust.

Use high quality stove cement.

New cement hardens quickly when exposed to air.

- Clean and prepare parts ahead of time.
- Apply cement just before putting the parts in place.

Work in an area where there is plenty of light, and a level work surface. **Wear gloves and protective eyewear.**

If the parts to be cemented are new, start with step 2. If old parts are to be re-cemented, they will need to be cleaned. Start with step 1.

1. Clean old cement from the channels and edges to be joined. Use a hammer and cold chisel, or screwdriver to remove old cement. Use a wire brush to finish cleaning the channels and edges. Vacuum the channels to remove dust.
2. Wipe the surfaces to be cemented with a damp cloth. Apply a generous bead of cement in the channel.

Excess cement may squeeze out of the joint. Excess cement which shows on the outside of the unit may be removed with a damp sponge. Clean up the excess promptly.

Excess cement on the inside of the unit will not usually be a problem. If clean-up is necessary, instructions will be given.

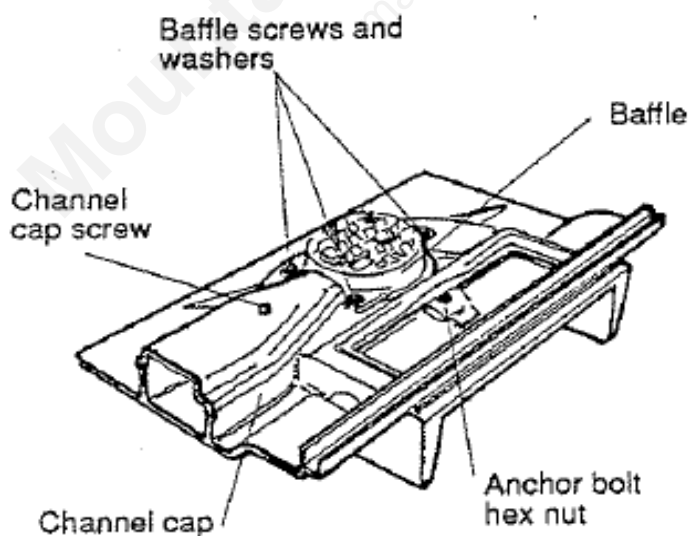
3. Join the two parts. Move the parts as little as possible after they have been put together.

For each illustration, the plate is labeled and the channel to be cemented is marked.

If you are going to re-install the damper, baffles, and channel cap on the inner top, follow steps 1 – 4 below. If these parts are already in place on the inner top, start with step 5 below.

1. Install the air distributor.

Place the inner top upside down on your work table.



*Underside of inner top.
Use this illustration for steps 1-3*

Put the air distributor in place with one of the holes in the end of the distributor lined up with the nub on the inner top.

2. Attach the baffle.

Attach the baffle to the top with three $\frac{3}{4}$ " hex head bolts and washers.

3. Attach the channel cap.

Cement the channel for the channel cap in the underside of the inner top as shown in Fig.C-1 below. Attach the channel cap with a 2" hex head bolt, being sure the air distributor is lined up properly as you secure the cap.

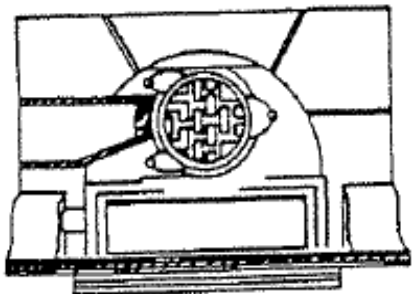
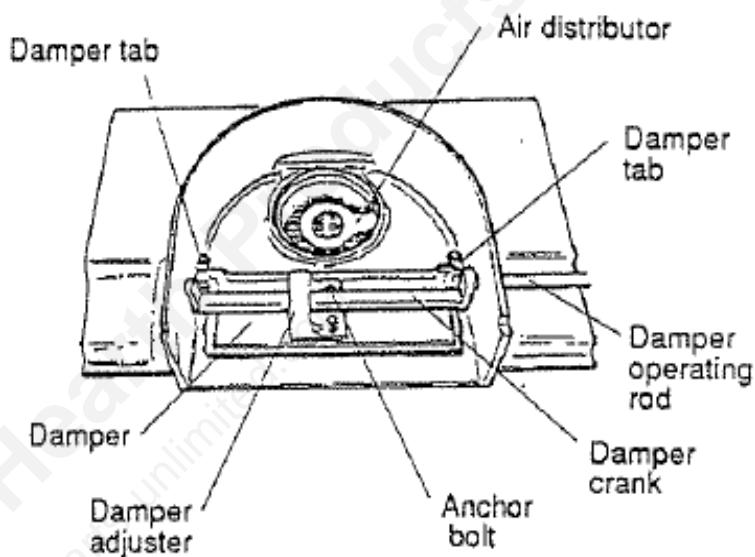


Fig. C-1 Inner Top (underside)



*Top side of inner top.
Use this illustration for step 4.*

4. Install the damper.

Put the damper in place, and secure it with the two damper tabs and $\frac{1}{2}$ " hex head bolts.

NOTE: Be sure the damper moves freely before continuing with the assembly.

5. Install the inner bottom.

Cement the channels in the bottom plate as shown in Fig.C-2 below.

Place the inner bottom in the cemented channels in the bottom. Bolt the inner bottom loosely to the bottom with two $3\text{-}\frac{3}{4}$ " hex head bolts and washers. The bolts will be tightened after the sides and back are in place.

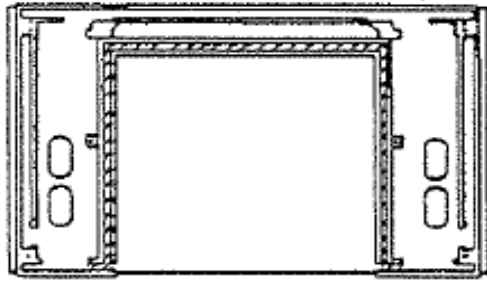


Fig. C-2 Bottom

6. Place the left side in position.

Cement the channels in the left side as shown in Fig.C-3 below. Stand the left side in position, and brace it so it will stay upright as you install the next parts.

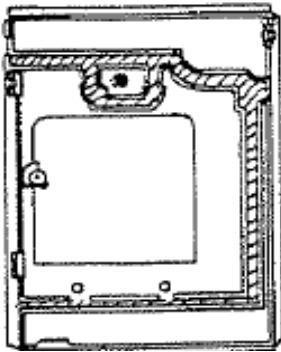


Fig. C-3 Left Side

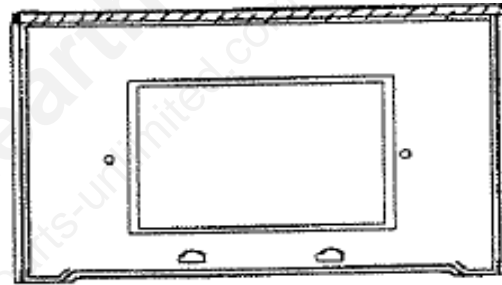
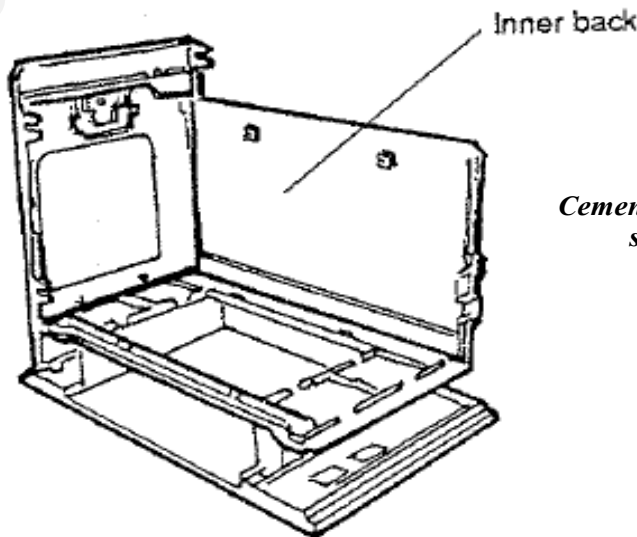


Fig. C-4 Inner Bottom

7. Install the inner back.

Cement the channel in the inner bottom as shown in Fig.C-4 above. Put the inner back in its channel in the bottom, and slide it to the left so it's left edge is seated in the matching channel in the left side.



Cement the channel in the inner bottom and slide the inner back into position

8. Install the grate back.

Attach the grate back to the inner back with two $\frac{3}{4}$ " hex head bolts and washers.

9. Install the inner top.

Cement the channel at the rear of the underside of the inner top as shown in Fig.C-1 (see step 3). Place the rear of the inner top on the top in the inner back, and slide it to the left so the left edge of the inner top is seated in the groove in the left side. Be sure that the outer end of the channel cap is fully against the left side.

10. Install the right side.

Cement the channels in the right side as shown in Fig.C-5 below.

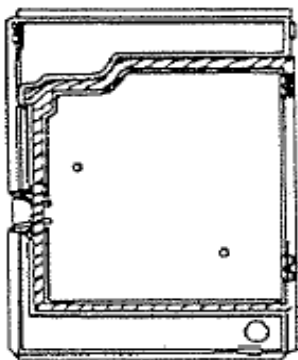
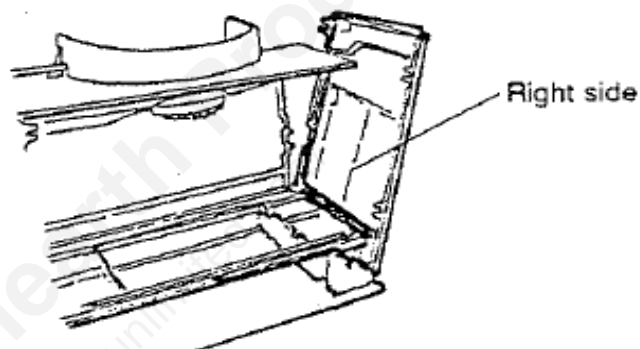


Fig. C-5 Right Side



Place the bottom of the side plate in position and move the top of the right side inward

With the top of the side leaning slightly outward, place the right side in position on the bottom. Push the top inward making sure the right edge of the inner top is in the groove in the right side. Brace or clamp the left and right sides.

11. Install the back.

Cement the channels in the back as shown in Fig.C-6 below.

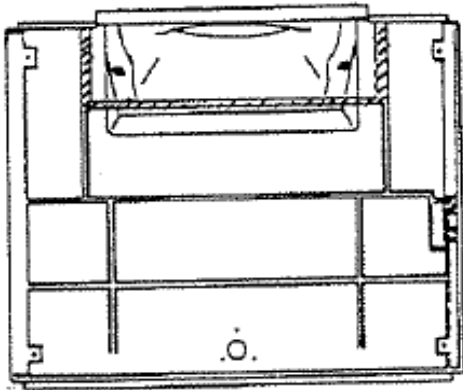
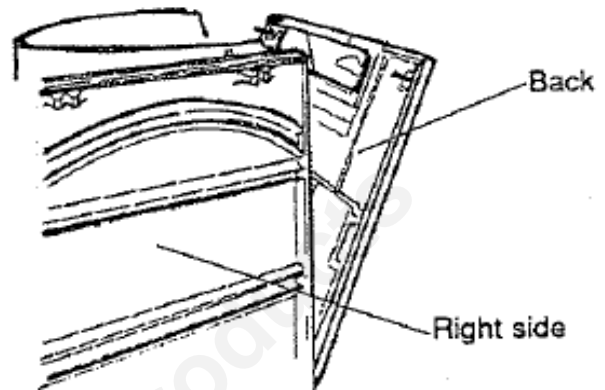


Fig. C-6 Back



Place the bottom of the back plate in position and move the top of the plate inward

With the back leaning slightly outward, put the back in position on the bottom. Push the top of the back inward so the studs at the top of the back will pass through slotted tabs on the sides. Place washers on the studs. Screw hex nuts onto the studs to secure the back to the sides. Tighten the bolts holding the inner bottom to the bottom.

12. Install the side wear plate.

If the stove has a side wear plate, attach it to the right side with two $\frac{3}{4}$ " hex head bolts.

13. Install the front.

If you have removed the air intake channel, re-install it now. Apply cement to the mating areas where the edges of the channel will meet the front, install the air intake rod and valves, secure them with a spring-loaded tab and a hex bolt, and attach the channel to the front with four hex head bolts.

Cement the channels in the front as shown in Fig.C-7

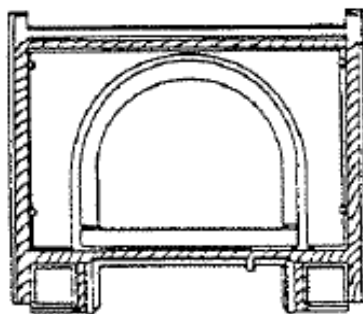


Fig. C-7 Front

Place the front on the bottom with the top leaning slightly outward. Move the top of the plate into position so the studs in the front pass through the slotted tabs in the sides. Place washers on the studs. Screw hex nuts onto the studs to secure the front to the sides.

14. Install the damper rod, adjuster, and crank.

Put the damper crank through the damper adjuster, with its square socket on the left end. Put the nub on the right end of the crank into its hole in the cowl ('horseshoe') in the inner top.

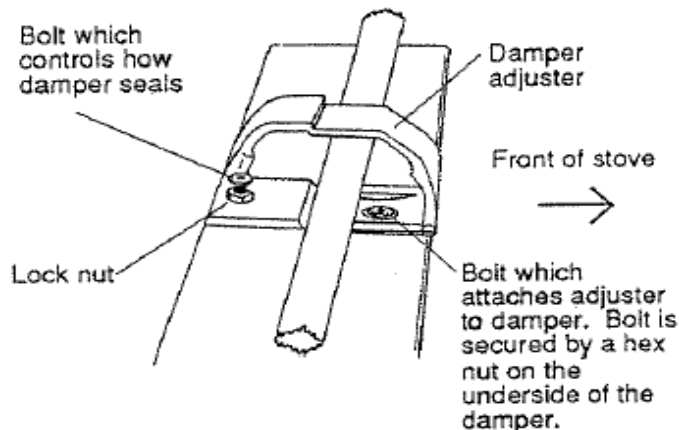
A. On a stove with a threaded steel damper operating rod, pass the rod through the hole in the left side of the stove, through the cowl, and into the end of the damper crank. Turn the rod with the fallaway handle, threading the rod into the hole in the cowl until the square inner end of the rod penetrates the square socket in the left end of the damper crank. The damper adjuster will travel with the crank. When the rod is fully threaded into the cowl (there should only be one thread left showing on the rod), attach the adjuster to the damper with a one-inch hex bolt going through the forward hole in the base of the adjuster. Use a nut under the damper to secure the bolt.

B. On a stove with an unthreaded steel damper operating rod, attach the adjuster to the damper with a one-inch hex bolt going through the forward hole on the base of the adjuster; secure the bolt with a hex-nut underneath. Pass the steel rod through the left side of the stove, through a washer, through the cowl on the inner top, and into the square socket on the end of the damper crank. Secure the rod in place with a c-clip.

NOTE: Before installing the combustor, refractory and top, check the operation of the damper.

When the handle is placed on the damper operating rod and is turned clockwise (as viewed facing the left side of the stove), the damper should lock in the closed position and should seal snugly against the inner top. If adjustment is needed follow this procedure:

The hex bolt which attaches the adjuster to the damper is secured by a nut on the underside of the damper. Loosen this nut, and loosen the bolt a turn or two. A hex bolt passing through the adjuster and pressing against the damper varies the position of the adjuster on the damper and controls how the damper seals when the damper is closed. Loosen the lock nut on the bolt. Tighten this bolt a little. Test the damper. Continue adjusting until the damper closes properly. Then tighten both hex nuts.



15. Install the catalytic combustor and the refractory package.

Be sure the interam gasket is in place around the bottom of the combustor. Replace the gasket, if necessary. Install the catalytic combustor and refractory package.

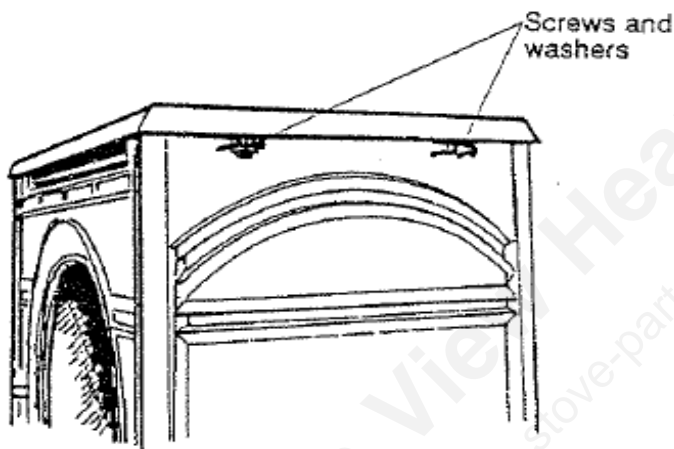
16. Insert the brass trim in the top of the front.

17. Install the flue collar.

The two 1" Phillips round head bolts which hold the flue collar to the stove are secured with nuts on the inside of the stove.

18. Install the top.

Place the top on the firebox, and secure it with four 1" cap screws and washers. The screws pass upward through slotted tabs on the sides and into the underside of the top.



Attach the top plate to the stove with four 1" screws and washers

19. Install the sleeve and probe thermometer.

20. Install the slotted grate and andirons.

The grate drops into place without hardware. Sockets in the inner bottom accept the andirons.

21. Install the doors.

Put hinge pins through the hinge parts on the doors, and simply position them on the hinge parts on the stove body and pass the hinge pins through the stove body hinge part.

22. Install the hearth.

Attach the hearth with two 7/16" hex head cap screws.

***Reminder:** If you have installed major new parts, remember to re-cure the stove with a series of small fires before resuming normal burning.

GASKETING

If you are replacing gaskets as part of standard maintenance, refer to the Maintenance Section of the **Owner's Guide**. If you are replacing all gaskets while re-building a firebox, follow the instructions given below.

Prepare parts carefully so that new gaskets will stay firmly in place. Channels must be free of old gasketing, cement and paint, and free of dust.

Use *Vermont Castings* Gasket Cement for all seams except door gaskets which may use RTV Silicone.

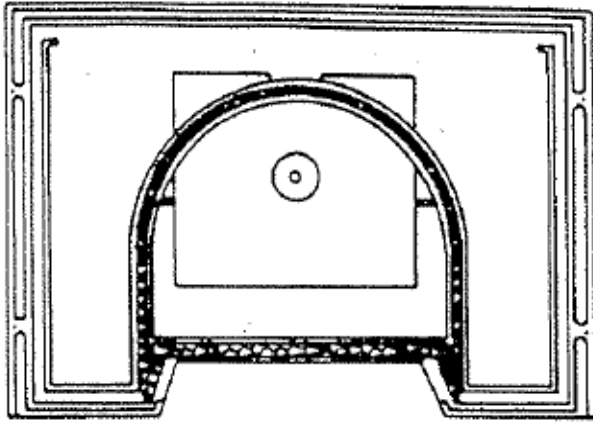
***Work in an area where there is plenty of light and a level work surface. Wear gloves and protective eyewear.**

If you are going to install gaskets on clean, new parts, start with step 3. If you are going to re-gasket old parts, they will need to be cleaned. Start with step 1.

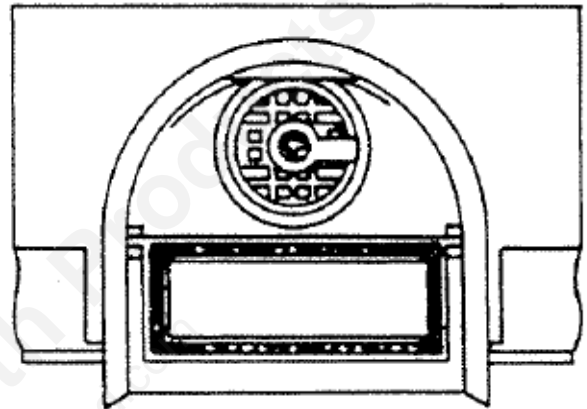
1. Remove old gaskets. If the ends of the gasket meet, note where the joint is.
2. Clean the channels. Use a hammer and cold chisel or screwdriver to remove old cement. Use a wire brush to finish cleaning the channel. Vacuum the channel to remove dust.
3. Choose the correct size gasket, and cut it to the right length, allowing an inch extra for trimming. Size and length information are given on the illustrations.
4. Wipe the channel to be gasketed with a damp cloth. Place an unbroken 1/8" bead of cement in the channel to be. Avoid using too much cement. The cement should not saturate the gasket, just hold it in place.
5. Starting with one end, lightly press the gasket into the cemented channel. Trim excess gasket with shears or side cutting pliers. Do not leave any ragged ends. If the ends of the gasket meet, there should be no gaps or overlaps. Do not stretch the gasket as this will make it too thin. A thin gasket may not make a good seal.
6. If possible, place the gasketed part against the surface it will meet. This will seat the gasket evenly.
7. Clean any excess cement that has squeezed out around the gasket.

8. After installing new gaskets, it may be necessary to make adjustments on the damper or load door. Refer to the Maintenance Section of the **Owner's Guide** for information on testing and adjusting the door latch and testing gaskets for proper fit.

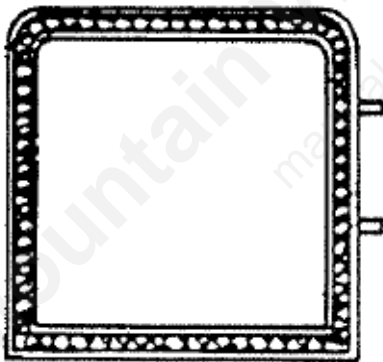
For each illustration, the information includes the plate to be gasketed, the length and size of the gasket, and the joint to be sealed. Gasket lengths are given for the Extra-Large Heater, the Large Heater, and the Small Heater.



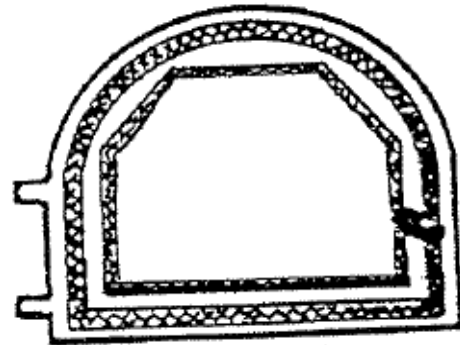
*Fig. G-1 Top Underside
Small, Large & Extra Large 50" of $\frac{3}{8}$ " Fiberglass
Seals underside of top to inner top.*



*Fig. G-2 Top of Inner Top
Small, Large & Extra Large 25" of $\frac{3}{8}$ " Fiberglass
Seals damper to inner top.*



*Fig. G-3 Side Door
Extra Large 46"/Small & Large 40" of $\frac{7}{16}$ " Fiberglass
Seals side door to left side.*



*Fig. G-4 Inside of Front Door
Extra Large 60"/Small, Large 48" of $\frac{7}{16}$ " Fiberglass
Seals doors to the front.
Extra Large 48"/Small, Large 42" of $\frac{5}{16}$ " Fiberglass
Seals glass to door.*

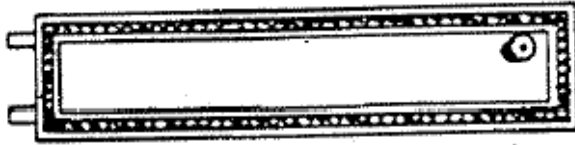


Fig. G-5 Ash Door
Extra Large 48"/Small, Large 36" of 7/16" Fiberglass
Seals ash door to the front.

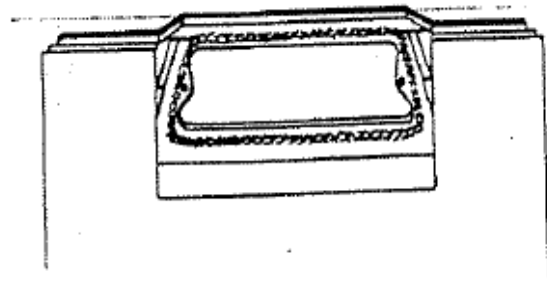


Fig. G-6 Back
Small, Large & Extra Large 36" of 5/16" Fiberglass
Seals flue collar to back.

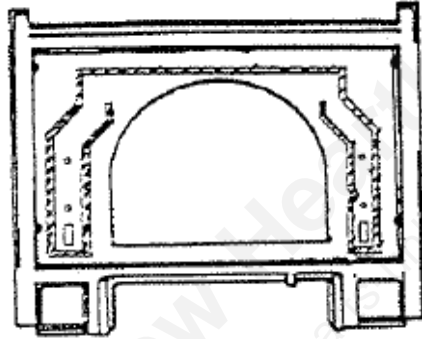


Fig. G-7 Inside of Front
Extra Large 87"/Small 78"/Large 82" of 5/16" Fiberglass
Seals air manifold to front.