

# DISASSEMBLY and ASSEMBLY

## DUTCHWEST SEQUOIA 2160

### Disassembly

Clear a space for storing parts as you take the stove apart. You will need 7/16" and 1/2" socket wrenches, and Phillips and straight screwdrivers. 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.

**\*\*Wear gloves, a dust mask, and protective eyewear.\*\***

Have the Exploded View available for reference. Directions are given as you face the front of the stove.

#### 1. Remove the Front Door.

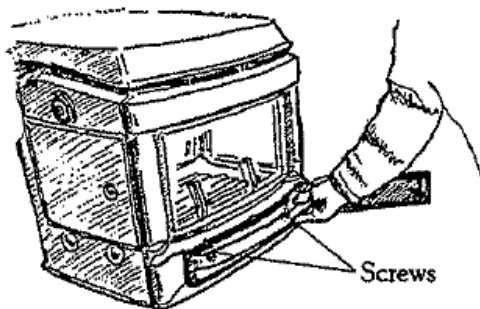
Open the front door, raise the door so the bottom hinge pin is clear of the bottom hinge socket, and lift the door from the stove.

#### 2. Remove the Side Door.

Open the left side door, and lift the door from the stove.

#### 3. Remove the Hearth.

Open the ash door. Two hex head cap screws pass upward through the hearth to hold the hearth to the stove. Loosen the screws and remove the hearth.



*Loosen the screws holding the hearth to the stove, and remove the hearth.*

#### 4. Remove the Ash Door.

Remove the hinge pin from the ash door, and remove the ash door.

#### 5. Lift the Andirons from the Stove.

**\*\*NOTE:** Stoves are being constantly improved. You may notice some small differences between your stove and these instructions. These instructions will serve as a guide for disassembling and assembling your stove.

#### 6. Remove the Top.

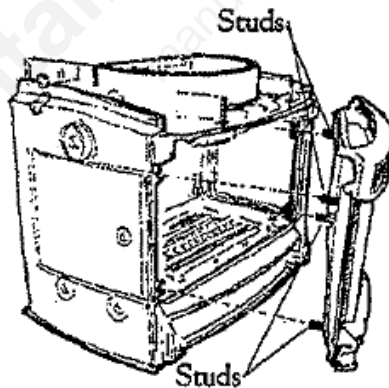
Long hex head screws passing upward through the inner top into the bottom of the top plate secure the top to the stove. The screws pass just outside the curved part of the inner top which holds the refractory package.

Reach inside the stove, and use the ½" socket wrench to remove the screws. The screw toward the left side is most easily reached through the side door. Lift the top from the stove/

To protect them from damage during the disassembly and assembly of the stove, remove the refractory package and the catalytic combustor from the inner top.

#### 7. Remove the Front

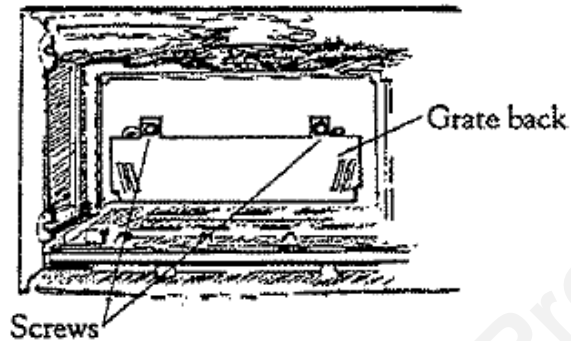
Threaded studs screwed into the back of the front plate pass through slotted tabs on the sides. Remove the nuts from these four studs and lift the front from the stove.



*Remove the nuts and washers from the studs, and remove the front.*

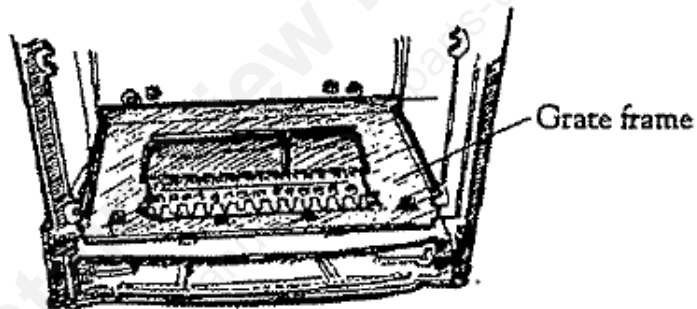
### 8. Remove the Grate Back.

Remove the two hex head cap screws holding the grate back to the inner back, and remove the grate back.



*Remove the screws from the grate back, and remove the grate back.*

### 9. Lift the Grate Frame from the Stove.



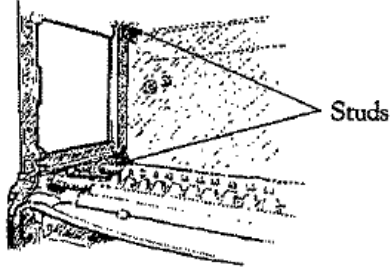
*Lift the rear edge of the grate frame and lift the frame from the stove.*

### 10. Lift the two Rocker Grates and the Fixed Grate from the Stove.

NOTE: Before removing the sides, prop up the front of the inner top. Save the prop for use during re-assembly.

### 11. Remove the Left Side.

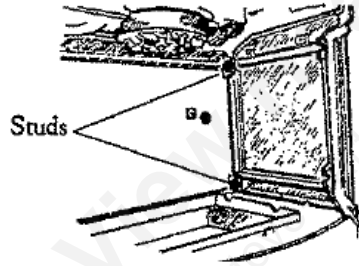
Threaded studs in the side plates pass through slotted tabs in the inner back. Hex nuts screwed onto the studs secure the side to the inner back. Remove the nuts on the two studs securing the left side, and remove the side.



*Remove the nuts from the studs, and remove the left side.*

### 12. Remove the Right Side.

Remove the nuts on the two studs on the right side, and remove the right side.

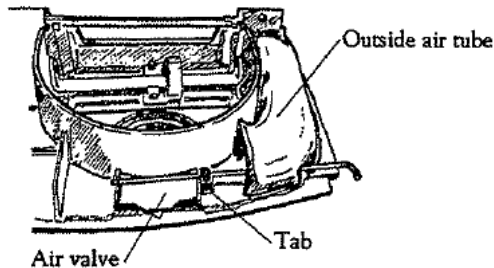


*Remove the nuts from the studs, and remove the right side.*

### 13. Lift the Outside Air Tube from the Inner Top.

### 14. Remove the Air Valve.

Remove the tab holding the air valve to the inner top, and remove the air valve.



*Remove the tab, and remove the air valve.*

### 15. Remove the Inner Top.

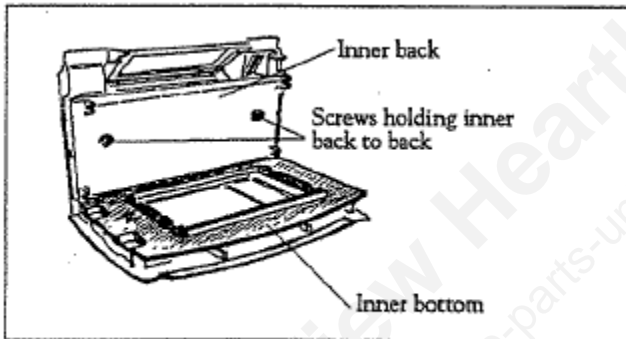
The inner top will be resting on the inner back. Lift the front edge of the inner top, and move it forward away from the back.

NOTE: To remove the damper, baffle and channel cap from the inner top, continue with step 19 after completing step 16 – 18.

### 16. Remove the Inner Back.

Remove the hex head cap screws holding the inner back to the back, and remove the inner back.

### 17. Lift the Inner Bottom from the Stove.

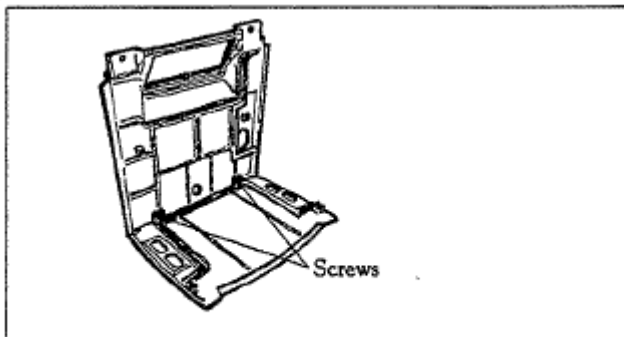


*Lift the inner bottom from the stove.*

### 18. Remove the Back.

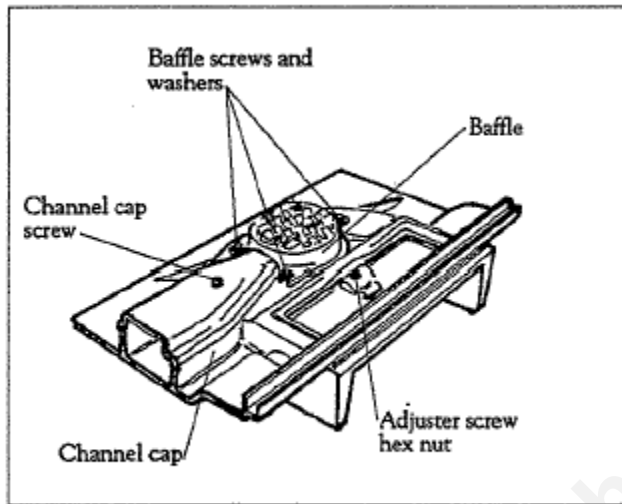
Two hex head cap screws near the bottom of the back plate hold the back to the bottom. Remove the screws, and lift the back from the bottom.

NOTE: To remove the damper, baffle and channel cap from the inner top, continue with step 19 below.



*Remove the screws, and lift the back from the bottom.*

19. Turn the Inner Top upside-down.



*Underside of inner top.  
Use this illustration for steps 20, 21 and 22.*

20. Remove the hex nut from the adjuster screw that passes through the Damper.

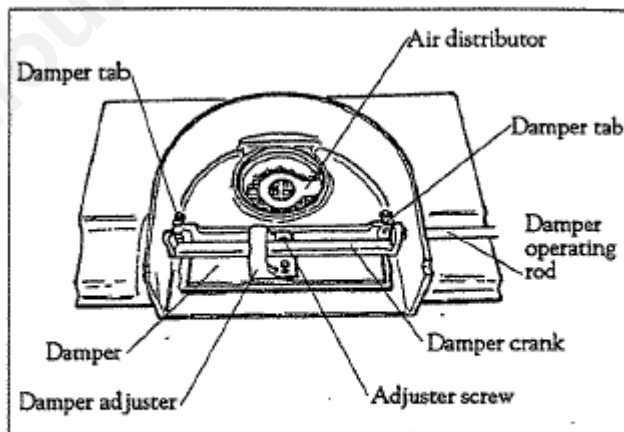
21. Remove the Channel Cap.

Remove the screw holding the channel cap to the inner top, and remove the cap.

22. Remove the Baffle.

Remove the three hex head cap screws that hold the baffle to the inner top, and remove the baffle.

23. Turn the Inner Top right-side up.



*Top side of inner top.  
Use this illustration for steps 24-27.*

**24. Remove the Damper Tabs.**

Remove the hex head cap screws holding the damper tabs to the inner top, and remove the tabs.

**25. Remove the hex head cap screw holding the Damper Adjuster to the Damper.**

**26. Remove the Damper.**

**27. Release the Damper Crank.**

The damper operating rod is threaded into the side of the cowl in the top. Unscrew the rod until the damper crank is released from the damper rod. The adjuster will be loosely attached to the crank until the rod is unscrewed.

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## Assembly

### Gasketing

If new parts are to be gasketed or old parts re-gasketed, do the gasketing before starting to assemble the stove. Refer to the Gasketing Section of the **Service Manual** for instructions.

Parts which need to be gasketed are:

- Top
- Inner top
- Side door
- Front door, including the opening for the glass
- Ash door
- Grate seal
- Back

### Cementing

Furnace cement sets up fairly quickly. Parts which need to be cemented should be cleaned and prepared for cementing before starting to assemble the stove, but cement should not be applied until just before installing the part. Refer to the Cementing Section of the **Service Manual** for instructions.

Parts which need to be cemented are:

- Bottom
- Inner bottom
- Left and Right sides
- Back
- Front
- Inner top

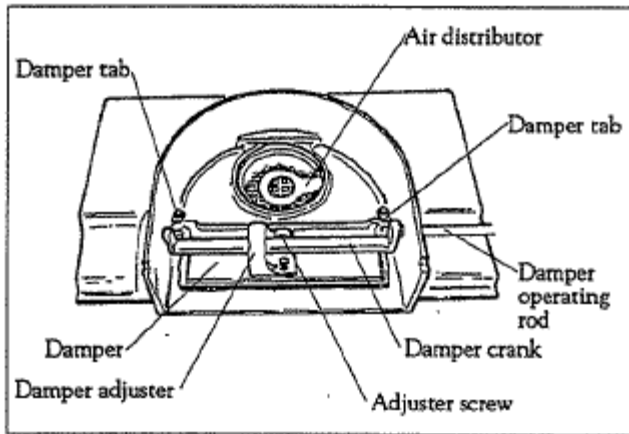
Screws and nuts are  $\frac{1}{4}$  - 20 thread size unless otherwise noted. Lengths of screws are given with the instructions.

If you are going to re-install the damper, baffle and channel cap on the inner top, follow steps 1 – 8 below. If these parts are already in place on the inner top, start with step 9 below.

Place the inner top right-side up on your work table.

#### **1. Place the Damper Crank in position.**

Pass the damper crank through the damper adjuster and insert the stub on the left end of the crank into the hole in the left side of the collar.



*Top side of inner top.  
Use this illustration for steps 1-6.*

**2. Install the Damper Operating Rod.**

Screw the damper operating rod into the right side of the collar until the square end of the operating rod meets the right end of the crank. Put the square opening in the end of the crank over the square end of the rod.

**3. Screw the Rod into position.**

Screw the rod in five more turns. The adjuster will turn with the crank.

**4. Install the Damper.**

Put the damper in place, and secure it with the two damper tabs and ½" hex head cap screws.

**5. Install the Damper Adjuster.**

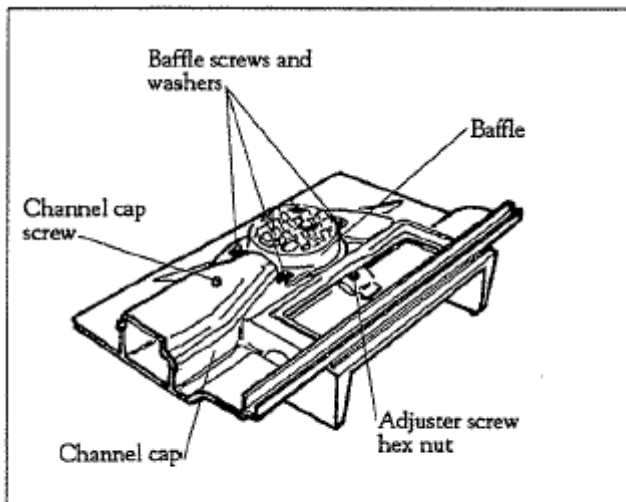
Attach the damper adjuster to the inner top with a 1" hex head cap screw and a washer.

**6. Place the Air Distributor in position.**

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

**7. Attach the Channel Cap.**

Cement the channels for the channel cap on the underside of the inner top as shown in Fig.C-4. Attach the channel cap with a 2" hex head cap screw. Be sure the air distributor is lined up properly as you secure the cap.



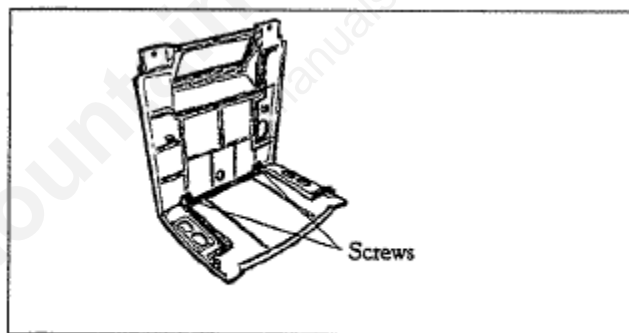
*Underside of inner top.  
Use this illustration for steps 7 and 8.*

**8. Install the Baffle.**

Attach the baffle to the top with three  $\frac{3}{4}$ " hex head cap screws and washers. Be sure the damper moves freely before continuing with the assembly.

**9. Install the Back.**

Cement the channels in the back plate as shown in Fig.C-1. Cement the channels in the bottom plate as shown in Fig.C-2. Place the back in the channel in the bottom. Attach the back to the bottom with two  $\frac{1}{2}$ " hex head cap screws and washers.

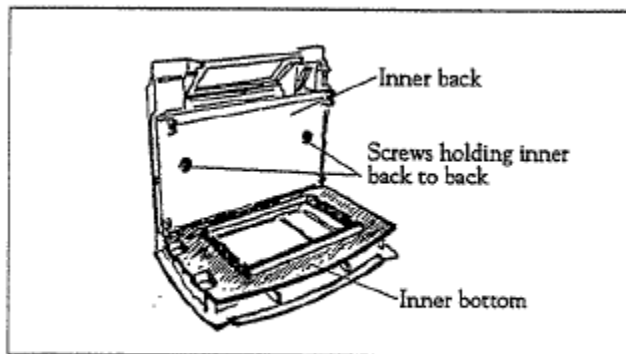


*After cementing the channels in the back and bottom,  
attach the back to the bottom.*

**10. Place Inner Bottom in the Cemented Channels in the Bottom.**

### 11. Install the Inner Back.

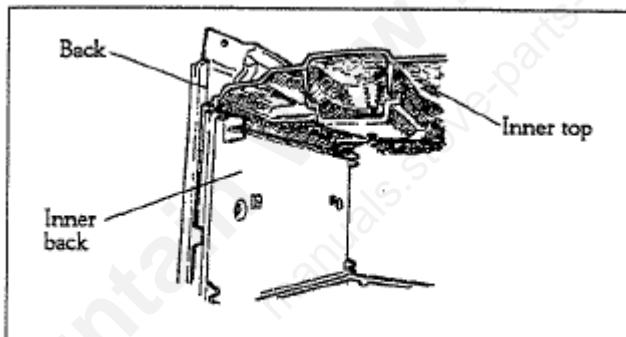
Cement the channel in the inner bottom as shown in Fig.C-3. Place the inner back in the cemented groove, and attach the inner back to the back with two 1" hex head cap screws and washers.



*Attach the inner back to the inner bottom.*

### 12. Place the Inner Top in position.

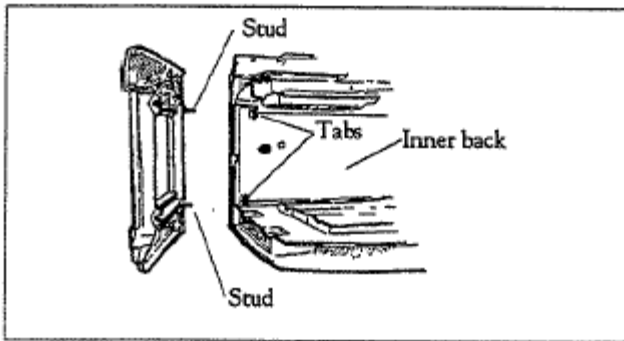
Cement the channel for the inner back on the underside of the inner top as shown in Fig.C-4. Place inner top on the inner back as shown in the illustration below. Prop up the front edge.



*The inner top rests on the inner back.*

### 13. Install the Left Side.

Cement the grooves in the left side as shown in Fig.C-5. Place the left side in position in the bottom. Threaded studs in the left side will pass through slotted tabs in the inner back. Secure the left side in position by placing washers and nuts on the studs and tightening the nuts. Lifting the front edge of the bottom slightly while forcing the side into position may help seat the side properly. It may be necessary to use the dead blow hammer to seat the side properly.

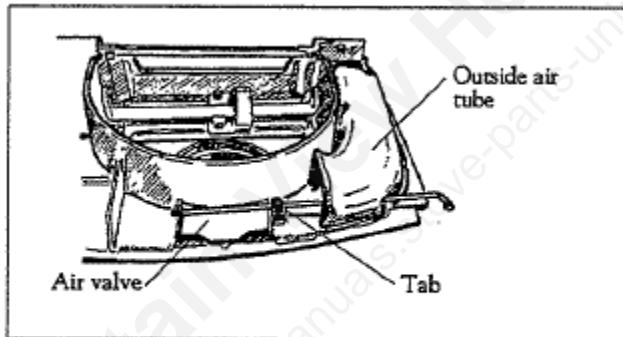


*Threaded studs in the side will pass through tabs in the inner back.*

#### 14. Install the Air Valve.

Place the air valve in position and secure it with the damper tab and a  $\frac{3}{4}$ " hex head cap screw. Test the operation of the air valve. Re-install if necessary.

#### 15. Place Outside Air Tube in position.



*Attach the air valve with a damper tab and  $\frac{3}{4}$ " screw. Place the outside air tube in position.*

#### 16. Install the Right Side.

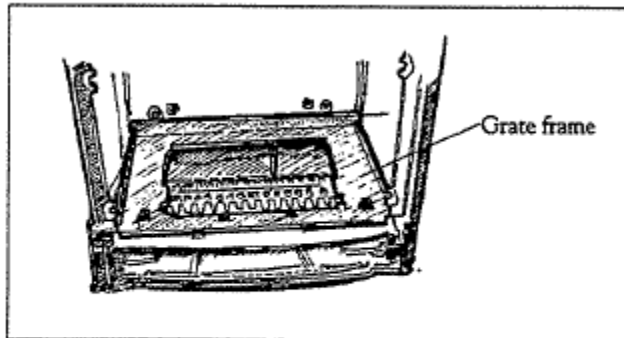
Cement the grooves in the right-side as shown in Fig.C-6. Install the right side. Secure the side with washers and nuts threaded onto the studs.

#### 17. Install the Grates.

Place the two rocker grates (front and rear) and one fixed grate (middle) in position on the inner bottom.

### 18. Install the Grate Frame.

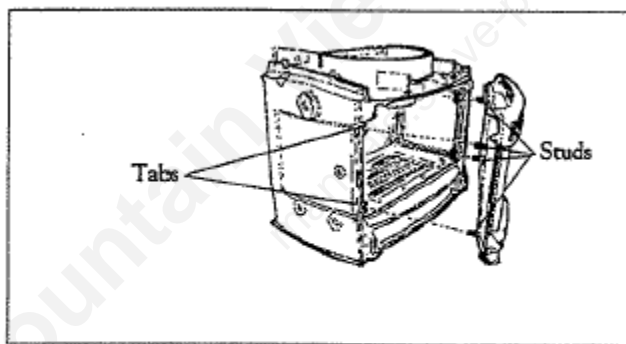
Tilt the two rocker grates slightly to the rear. Place the grate frame in position as shown. Remember, the two rocker grates must tilt slightly to the rear.



*With the rear edge raised, place the front edge of the grate frame in position. Lower the back edge.*

### 19. Install the Front.

Cement the grooves in the front as shown in Fig.C-7. Place the front in position, and secure it with washers and nuts tightened down on the threaded studs.

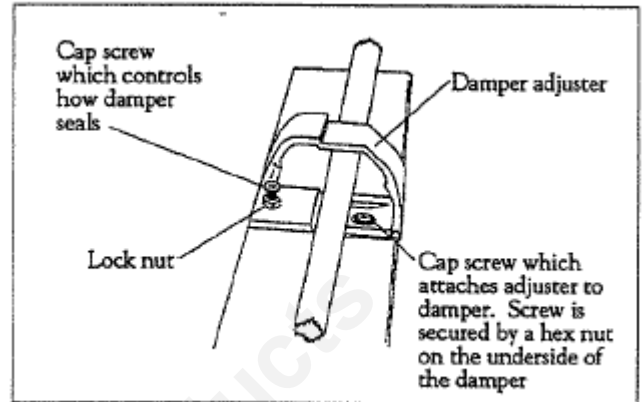


*When the front is in place, secure it with nuts and washers screwed onto the studs.*

**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, the damper should lock in the closed position and should seal tightly against the inner top. If adjustment is needed follow this procedure:

The cap screw which attaches the adjuster to the damper is secured by a hex nut on the underside of the damper. Loosen this hex nut, and loosen the screw a turn or two. A screw 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 this screw. Tighten the screw a little.

Test the damper. Continue adjusting until the damper closes properly. Then tighten both lock nuts.



## 20. Put the Catalytic Combustor and Refractory Package in place.

Put the catalytic combustor in place on the inner top. Be sure the interam gasket is in place around the bottom of the combustor. Place the refractory package in position.

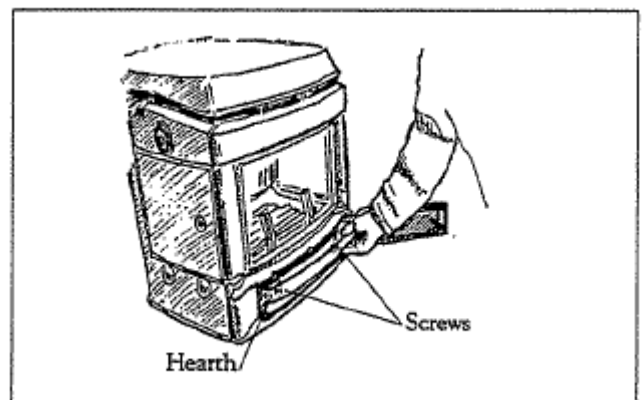
## 21. Install the Top.

Place the top in position. Pass the 3 3/4" hex head screws upward through the inner top and into the bottom of the top plate. Secure the top by tightening the screws.

## 22. Install the Andirons, Ash Door, and Side Door.

## 23. Install the Hearth.

Open the ash door, and secure the hearth to the stove with two 5/8" hex head cap screws and washers. The screws pass upward through slotted tabs in the hearth into the stove.



## 24. Install the Front Door.

### REMINDER

**New cast-iron must be seasoned with a few small "break-in" fires. If you have added large, new castings, burn a few small short fires to season the new iron.**

## Gasketing

If you are replacing load door, glass or damper, gasket as part of standard maintenance, refer to the "How to Replace Gaskets" information in 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, unless other cement is specified.

Work in an area where there is plenty of light and a level work surface.

**\*\*Wear gloves, a dust mask, 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.

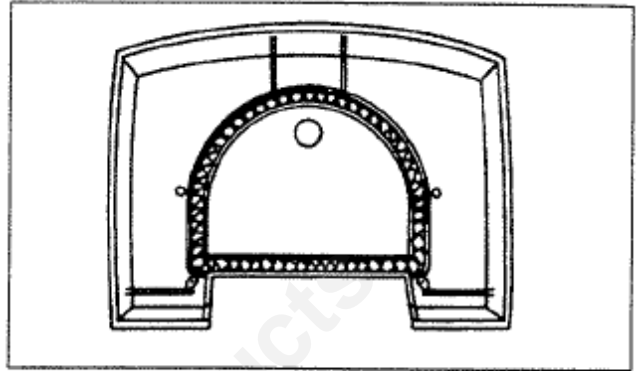


Fig. G-1 Top (underside)  
50" 3/8" fiberglass  
Seals under side of top to inner top.

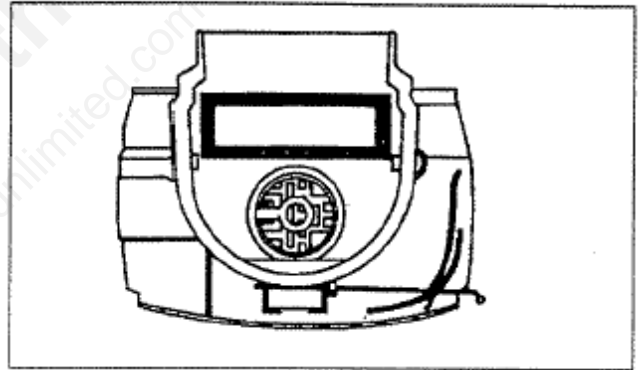


Fig. G-2 Inner Top (top side)  
34" 3/8" fiberglass  
Seals damper to inner top.

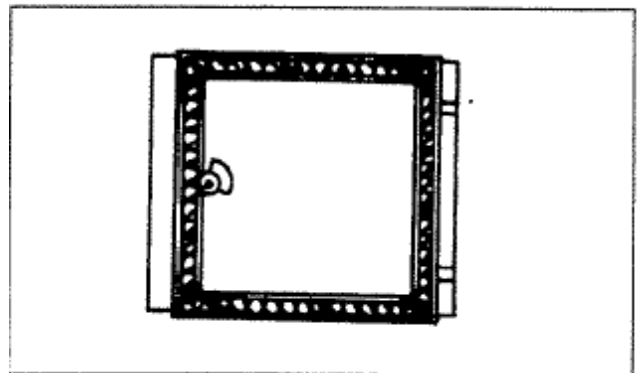


Fig. G-3 Side Door  
38" 3/8" fiberglass  
Seals side door to left side.

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 the damper.

For each illustration, the information includes the plate to be gasketed, the length and size of the gasket, and the joint to be sealed.

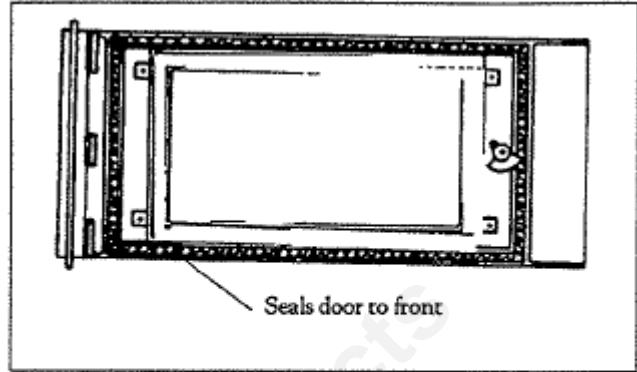


Fig. G-4 Front Door  
60" 3/8" fiberglass  
Seals door to front.

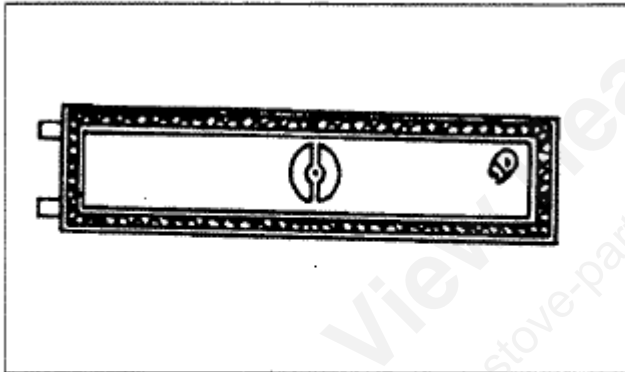


Fig. G-5 Ash Door  
40" 3/8" fiberglass  
Seals ash door to front.

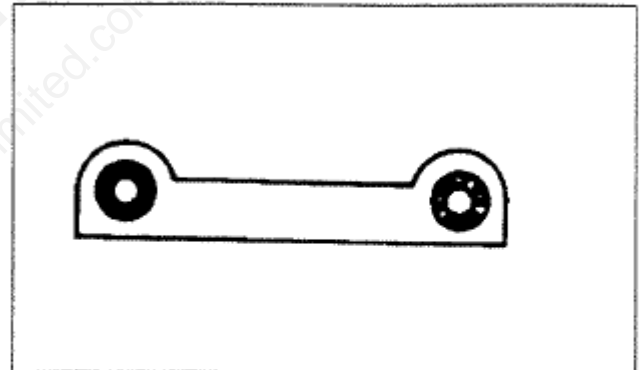


Fig. G-6 Grate Seal Gasket  
6" 1/4" fiberglass gasket with wire  
Seals grate seal to side.

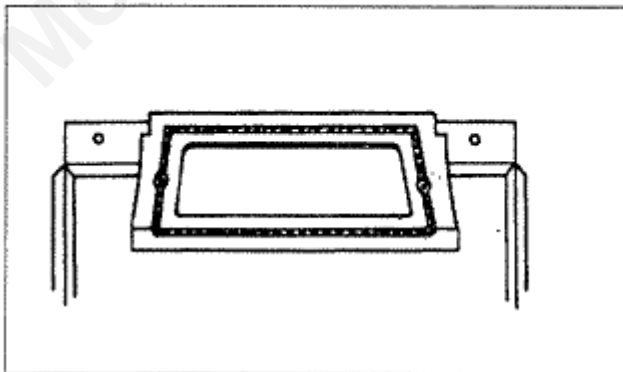


Fig. G-7 Back  
36" 1/4" fiberglass gasket  
Seals flue collar to back.

In addition, the special Interam gasket is used around the bottom of the catalytic combustor.

## Cementing

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, a dust mask, 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.

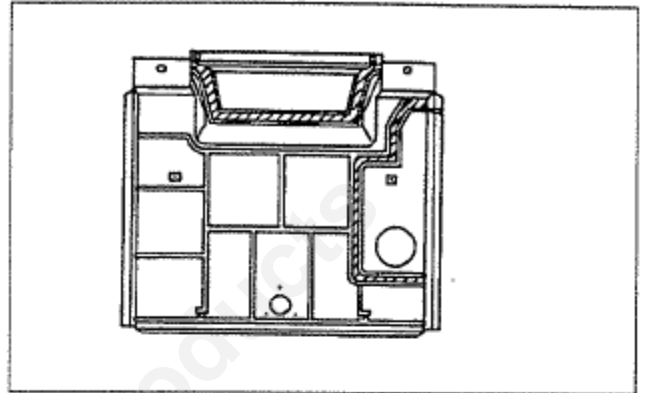


Fig. C-1 Back

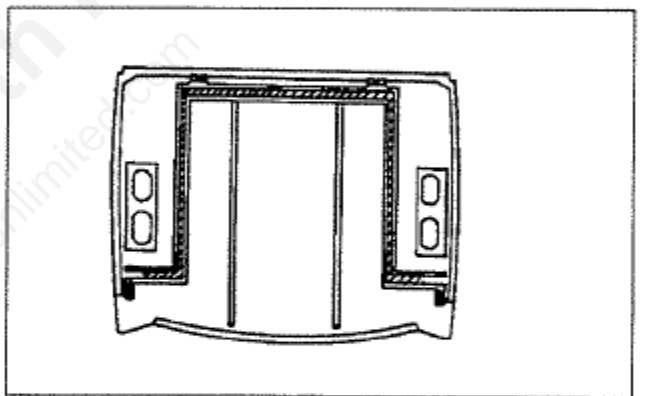


Fig. C-2 Bottom

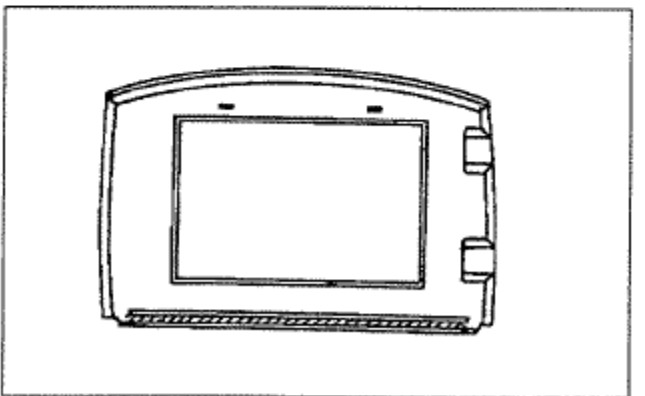


Fig. C-3 Inner Bottom

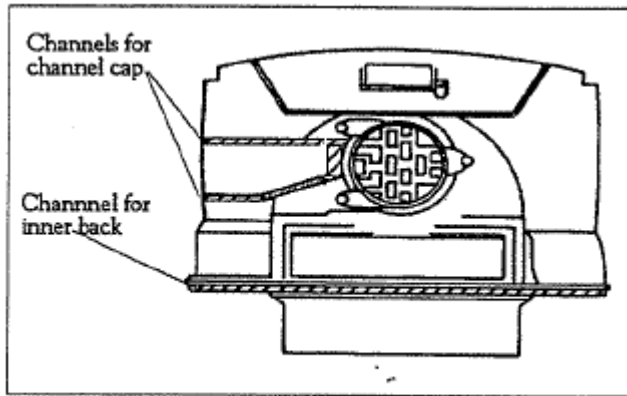


Fig. C-4 Inner Top (underside)

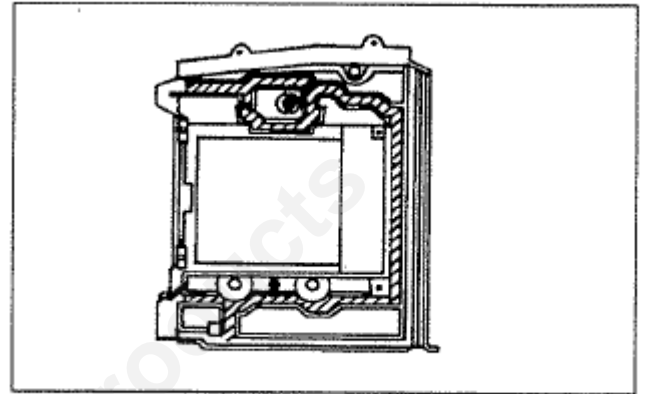


Fig. C-5 Left Side

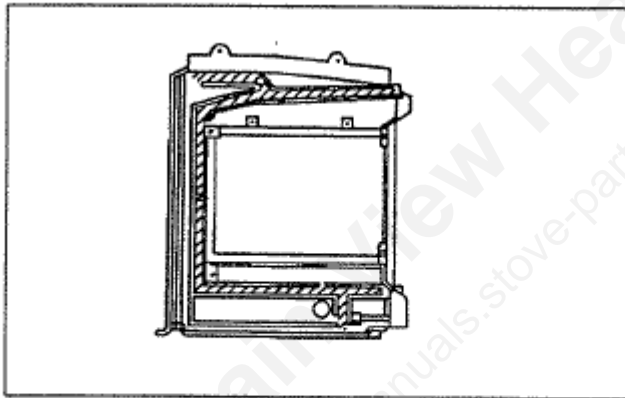


Fig. C-6 Right Side

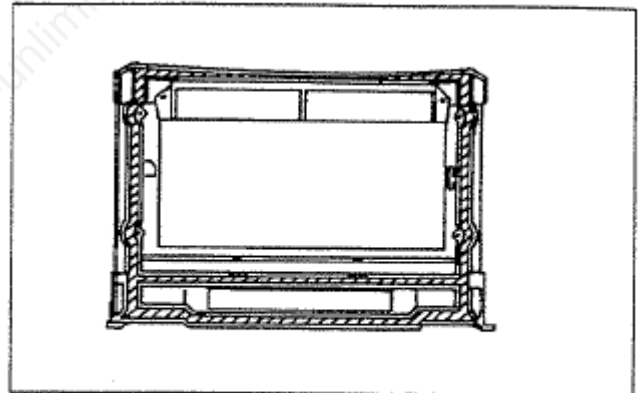


Fig. C-7 Front

# ASSEMBLY

## Sequoia Coal Kit Instructions FA455 Model 2160

*Remove the Catalytic Combustor **before** burning coal.*

The Sequoia has a catalytic combustor installed at the factory for burning wood. If you have just received your stove or have been burning wood, the combustor **must be removed** before you can burn coal.

The combustor must be re-installed before you burn wood again.

**NOTE: IT IS AGAINST THE LAW TO BURN WOOD IN YOUR STOVE WITH THE CATALYTIC ELEMENT REMOVED, EXCEPT FOR COAL IGNITION PURPOSES.**

Before you begin, observe the basic safety precautions for working with dusty materials: always wear safety glasses, a dust mask, and gloves.

Remove the stove top plate. It is held in place by two bolts. One is accessible when you open the front door and look upward toward the right underside of the top plate. The other is most easily reached through the side door. Remove the two bolts.

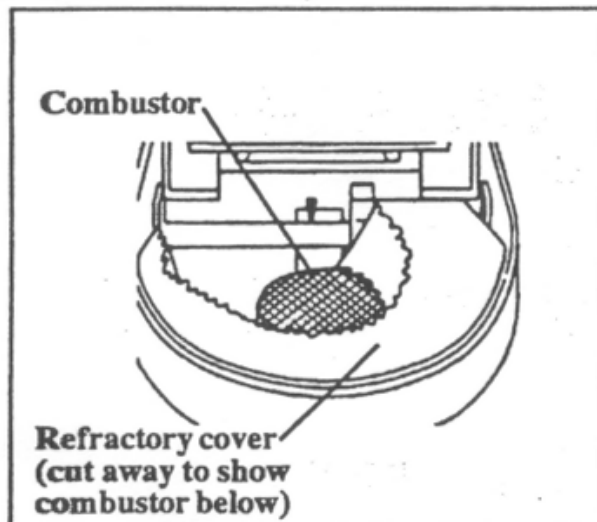
With the bolts removed, lift the top. It is heavy, and you may choose to have a helper assist you.

Immediately below the top you'll see the combustor's removable refractory cover.

Carefully remove the refractory cover. It is extremely delicate and should be handled as little as possible.

Lift the combustor gently out of its chamber. You may have to work it back and forth carefully to remove it. If you have been burning wood, this is a good time to check the combustor and the area beneath the refractory cover for a build-up of fly ash, and remove any ash by gently blowing air through the combustor. Do not brush the surface, as this could damage the element.

Refer to the manual that was included with the stove for more information on combustor inspection.



**The combustor is located beneath a refractory cover.**

If the combustor is in good condition and clean, store it carefully in a safe place. Re-install the refractory cover in the stove in its original position.

Before replacing the stove top, check the damper. If the gasket is intact, but the damper isn't locking tightly, adjustment should be made. Also check the gasket that seals the top plate.

The procedure for gasket replacement, as well as instructions for damper adjustment, can be found on page 9 of the manual that came with the stove.

Replace the stove top, and tighten the two top plate bolts that secure it. Be sure that the top plate seats properly before tightening, and tighten the bolts alternately as you would tighten the bolts that secure a car wheel.

### *Remove the Grate Covers*

Your stove was shipped from the factory with the grate covers installed. They must be removed when you burn coal. The grate covers are for burning wood only. To remove them, reach under the grates and undo the two wing nuts, one for each grate.

### *Install the Coal Kit Components*

The coal kit consists of two coal grate sides and a grate front.

Place the grate sides along the sides of the firebox, fitting them into the grooves on the grate back. The smooth surface of each grate side should face the fire.

Set the grate front into place at the front of the firebox, just inside the door and in the small groove at the centre of the door opening.

### *Test the Shaker Grates*

Find the ends to the shaker grates on the left side of the stove, beneath the side loading door. Using the shaker tool supplied with the stove, rotate the grates to ensure that they operate freely. During normal operation you will turn the grates not more than 45 degrees. Rotating them the full 90 degrees will dump the fuel into the ash drawer and make it difficult to revive the fire.