Model 209 Fireback Replacement

Please read all the instructions before you begin the procedure. Confirm that you have all the necessary tools and materials. If you have any questions, technical support is available toll free at 1-800-866-4344, Monday-Saturday 9:00 – 5:00 ET

Tools Needed:
-1/2",7/16" socket or open wrench
-1/8", 5/32" Allen wrench
- Large flat blade screwdriver
- Putty knife
- Caulk gun

Materials Needed:
-P-363 (assembled)
-Gasket TBD
-Gasket glue
- Furnace cement
Note: You will need to remove the rear heat shield from the back of the stove and the screen inside the firebox before you begin. You will need plenty of working space around the stove. It will be helpful to soften the furnace cement by soaking it in hot water for 15-20 minutes prior to use.

1. Tie a piece of rope around the stove so as to hold all the components together when the top frame is removed. The rope should be located about 1/3 of the way down from the top of the stove. If you are top vented, remove the pipe from the flue collar.

2. Use a 1/8" allen wrench to back out the set screws at the top of each cast corner.

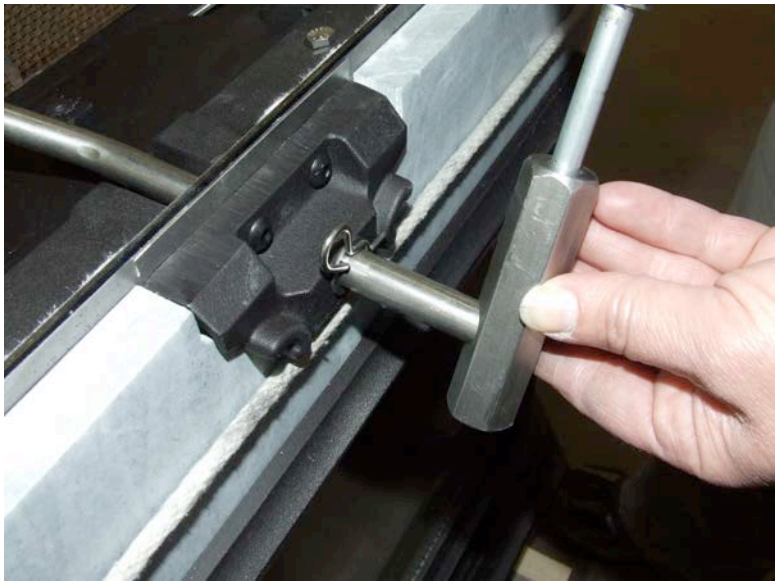
3. Locate the ends of the four draw rods on the bottom side of the stove base. They are located near the corners and are fastened with hex nuts. Looking from the front of the stove each nut will be to the back side of the leg bolts. Remove all four nuts. (leg removed in photo to show location of draw rod nut)

4. The draw rods pass through the body of the stove and are threaded into the top

cast iron frame. Turn them clockwise to release them. Let the draw rods hang loose once they are removed from the top.

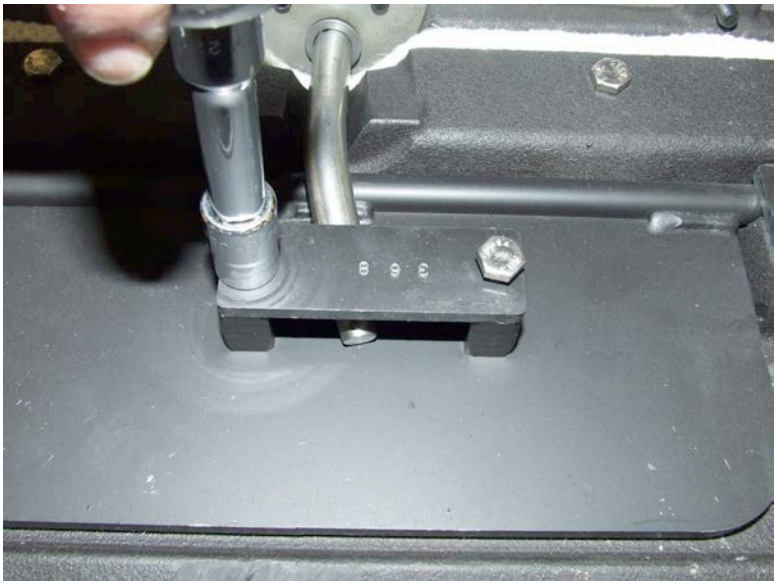
5. The top is very heavy. It will be helpful if two people lift it off of the stove body.

6. Loosen the set screws on each side of the brass damper handle using a 3/16” hex key. Pull the handle off from the original shaft.



7. Locate the push pin on the shaft on the front side of the stove. Tap it through with a hammer and punch as far as you can. Pull it out the opposite side with locking pliers.

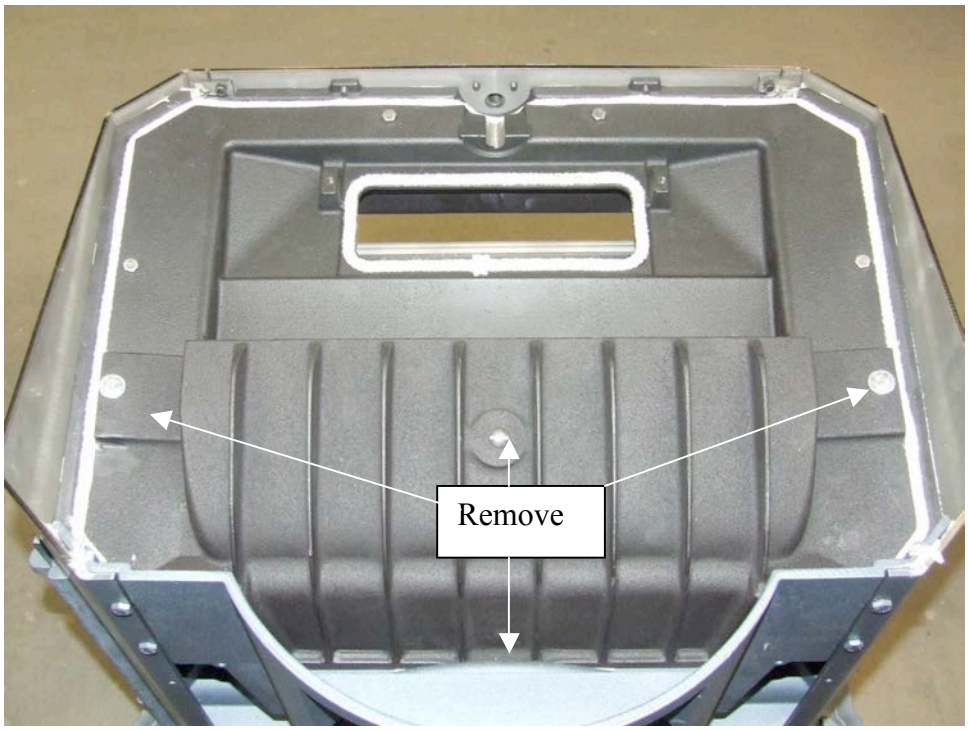
8. Use a 7/16” socket or wrench to remove the two bolts fastening the steel lift guide plate from the bypass cover. This is the plate that keeps the bypass shaft linked to the bypass cover.



9. Pull the bypass shaft out of the stove by pulling the shaft inward toward the back of the stove.

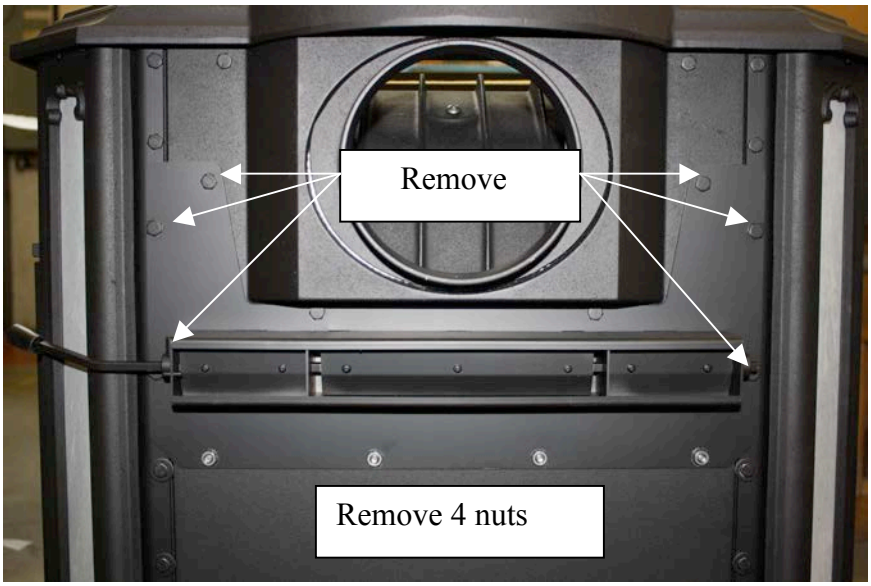
10. Slide the catalytic combustor forward and remove it from the stove.

11. Remove the three hex head bolts and single slotted bolt that hold the top half of the combustor housing in place. Remove the top half of the housing.



12. Remove the four hex head bolts that hold the lower catalytic combustor plate in place. There are two bolts along the front side and one on the left and right. Remove the plate.

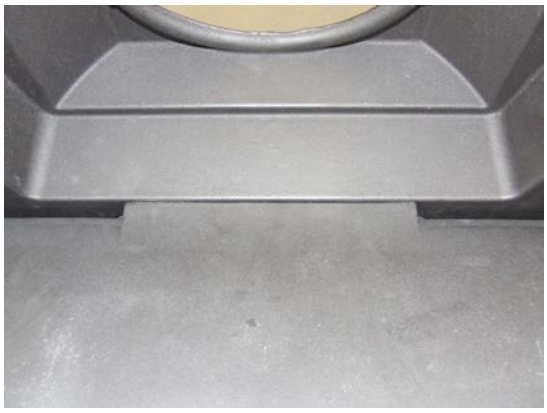
13. Remove the two button head screws that secure the fireback assembly to the cast iron air channels on the right and left sides of the stove. Lift up on the front edge to break the seal at the back of the fireback assembly.



14. Use a 7/16” socket to remove the bolts and nuts that secure the damper assembly to the back of the stove. An open end wrench should be used to remove the bolts at either end of the damper assembly. It is necessary to remove the damper to seal the new fireback assembly in place.

15. Drop the pre-assembled fireback assembly into place as shown here making sure it slides all the way to the rear. ***Note:*** *If it doesn’t fit, more grinding around the secondary air inlet on the rear wall or more bending of the corners of the sheet metal fireback retainer that slides into the air inlet might do the trick.*

16. Pull the fireback assembly back out a bit and lay a line of furnace cement on the top of the air channels as shown below, then slide it back into place. Clean up excess cement.



17. Secure the fireback assembly in place with a button head bolt on the right and left sides.
18. Lay a line of furnace cement to the left and right of the secondary air inlet and cover with ¼" gasket.

19. Place .187” gasket (or .250” if gap is wider) along the sides of the secondary air chamber from the rear to the front as shown here.

20. Cement the space inside the firebox where the secondary air chamber penetrates the rear wall. Wipe smooth with finger.

21. From the rear of the stove, cement in the gap around the entire secondary air inlet.

22. Place .187” gasket in this cement then apply a generous amount of cement over the gasket and smooth with your finger.

23. Use a putty knife to scrape away the original cement on the back of the stove. Be sure that all of the residue is removed completely.

24. Apply a bead of the furnace cement to the back of the stove as shown in the photo below. The cement will make a seal between the back of the stove and the damper assembly.

25. Use the four lower bolts as a guide to align the damper assembly with the back of the stove. Press the assembly into the cement evenly. Start the two outside nuts at the bottom corners. Start the two bolts at the upper corners. Start the remainder of

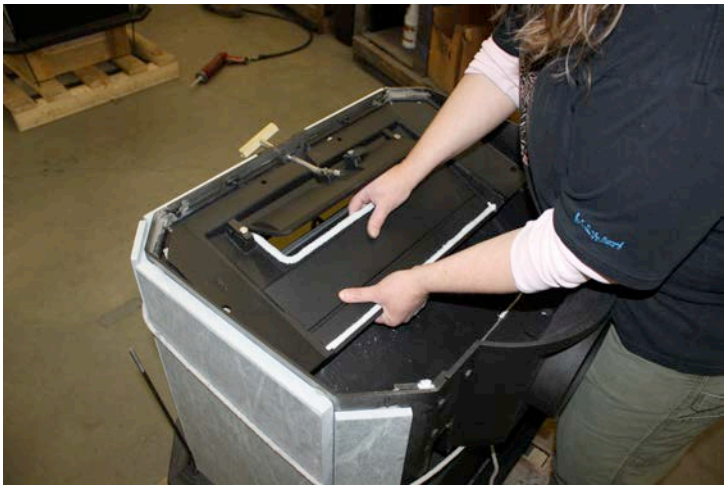
the nuts and bolts. You will need to replace the rear heat shield studs and spacers with bolts temporarily.

26. Tighten each bolt and nut evenly; alternate side to side and top to bottom.

27. Remove excess cement with a putty knife.

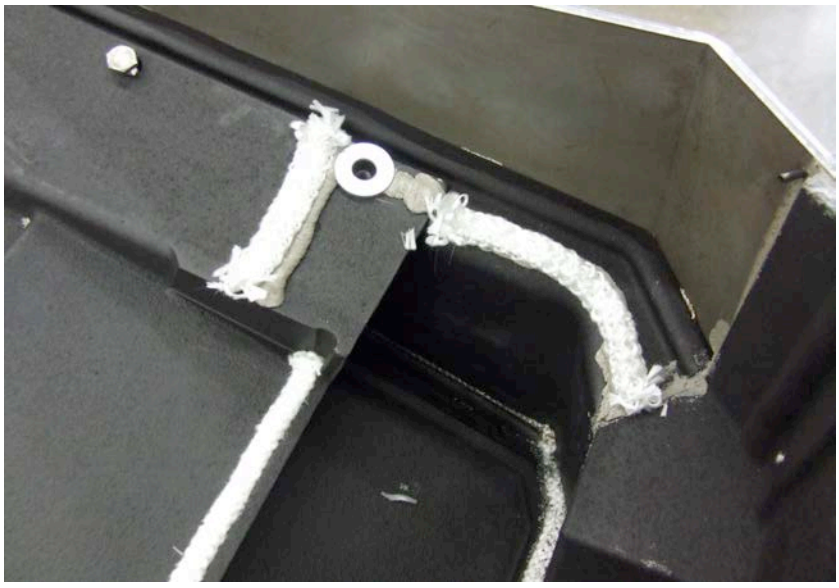
28. Lay a line of stove cement on top of the left air channel (P-320), the right air channel (P-321), and the front air manifold/wash (P-322).

29. Lower a catalyst base/by-pass plate (P-325) into place on the stove cement as shown below and secure with (4) ¼-20 x ¾ HHCS in the front 4 bolt holes, loosely for now.



30. Place .312” gasket on top of the stove cement that the catalyst top will sit on.

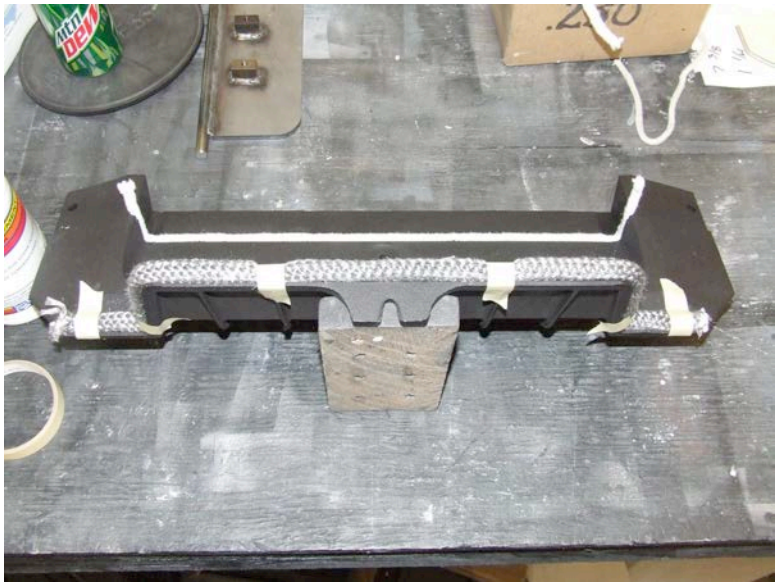
31. Run a line of gasket glue in the cat gasket channel of the catalyst base. Only put the glue on the horizontal channel, not the vertical yet. Run .250” gasket in the horizontal part of the channel only.
32. Put a line of stove cement and a .312” gasket on each wing in front of the 5/16” washer, and from the washer to the .312” gasket as shown here.



33. Lay the catalyst top upside down on your work bench. Lay a line of gasket glue in the catalyst gasket track and put .250” gasket in the track with and extra 1” of

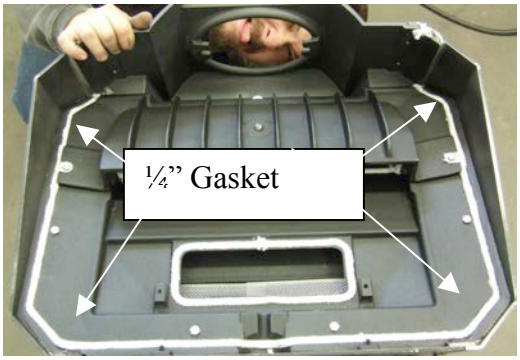
gasket on each end.

34. Lay a line of gasket glue on the rear gasket channel of the catalyst top. Put .500” LD gasket in this track.

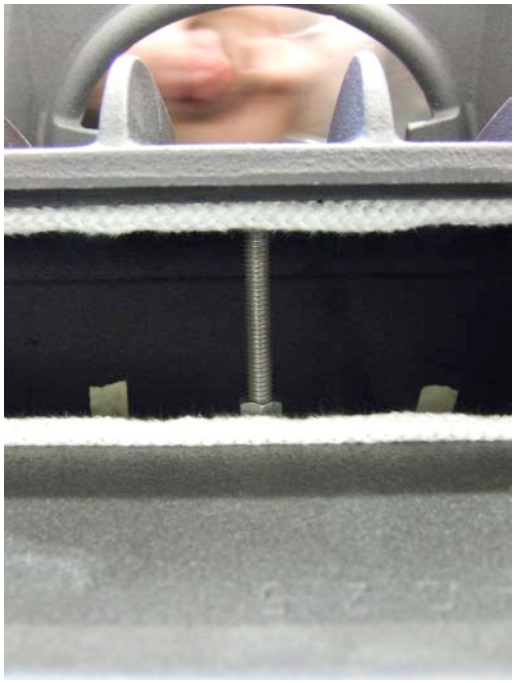


35. Lower the catalyst top (P-326) into place a secure the wings with (2) ¼-20 x 1” HHCS and a ¼” washer. Make sure the tab at the rear of the catalyst top is inside the lip of the rear wall as shown.

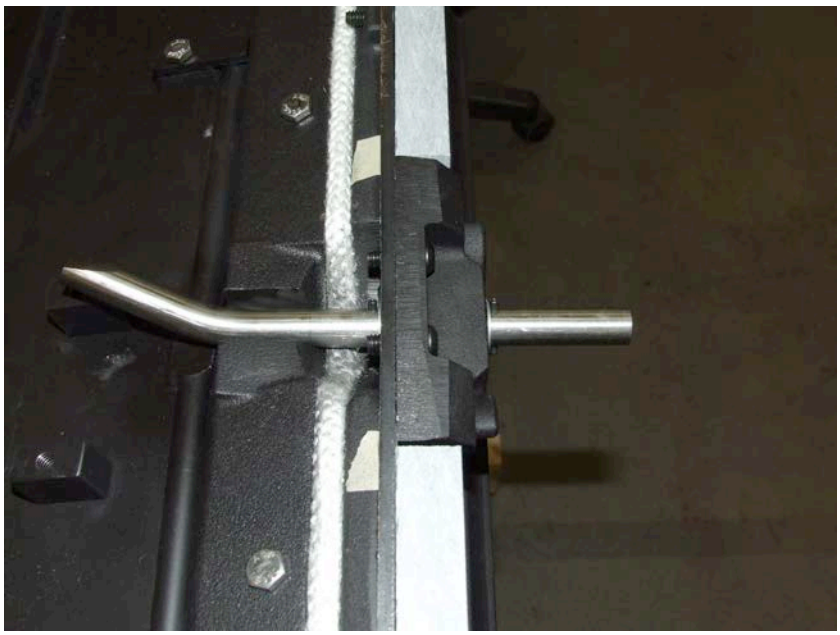
36. Tighten all the ¼-20 HHCS in the catalyst base and top.
37. Run a line of stove cement around the perimeter of the under and over cat start and stopping as shown below. Put ¼” gasket in this groove.



38. Take a 5/16”-18 x 3 ½” PHMS and slide it through the hole in the catalyst top. Put (2) 5/16”-18 nuts on the screw. Put anti-seize on the bottom of the thread and screw it into the catalyst base. Make contact on the catalyst top with the screw head and tighten only ¼ turn.



39. 12. Install the by-pass activation rod through the escutcheon and body box with a spacer on each side. Drive a 1/8” x ¾” roll pin through each hole in the rod to secure it in place. Secure the bypass handle to the rod. Make sure it is in the proper position to indicate whether the bypass is open or closed.



40. Carefully place the top cast onto the stove body. Be sure the draw rod bosses clear the exterior stones.

41. Insert each draw rod into the top frame and turn it about 4 full turns. It may be helpful to make a mark on the rods and count the revolutions.

42. Push down on the top cast to compress the gasket a little. Confirm it is seated evenly on the stove body.

43. Start the nut on each draw rod by hand.

44. Alternate between the four rods as you tighten the nuts. Make (5) half revolutions with a ratchet to start. Finish with 4-5 more half revolutions.

45. Tighten the set screws at the top of each cast corner.

46. Remove the rope.

47. Connect the pipe to the flue collar if it was removed.