

SUGGESTED ASSEMBLY INSTRUCTIONS

Use a fine file and a new No. 11 blade to remove any flash or parting lines from all of the castings. A set of fine hand drill bits and a set of cutting reamers are useful for fitting and preparing the various pieces.

A five-minute, two-part epoxy is used in favor of ACC cement. Once the epoxy has set for about seven or eight minutes, use the tip of a blade or fine pointed tweezers to "pick" and visible or excess epoxy away.

Blacken the brass and white metal pieces with a commercial blackening agent like A-West Blacken-It. Dunk each piece, one at a time, into the chemical. Use a small paint brush to dislodge any trapped air bubbles and insuring the entire surface of the casting is blackened. Remove the casting and place it into a cup of fresh water so all of the chemical is washed off. This is very important. Remove the castings from the water and set out allowing to dry.

Buff each piece carefully with a felt wheel and a dremel. This creates a wonderful aged and worn metallic patina. A bristle brush also works well chucked in a dremel tool.

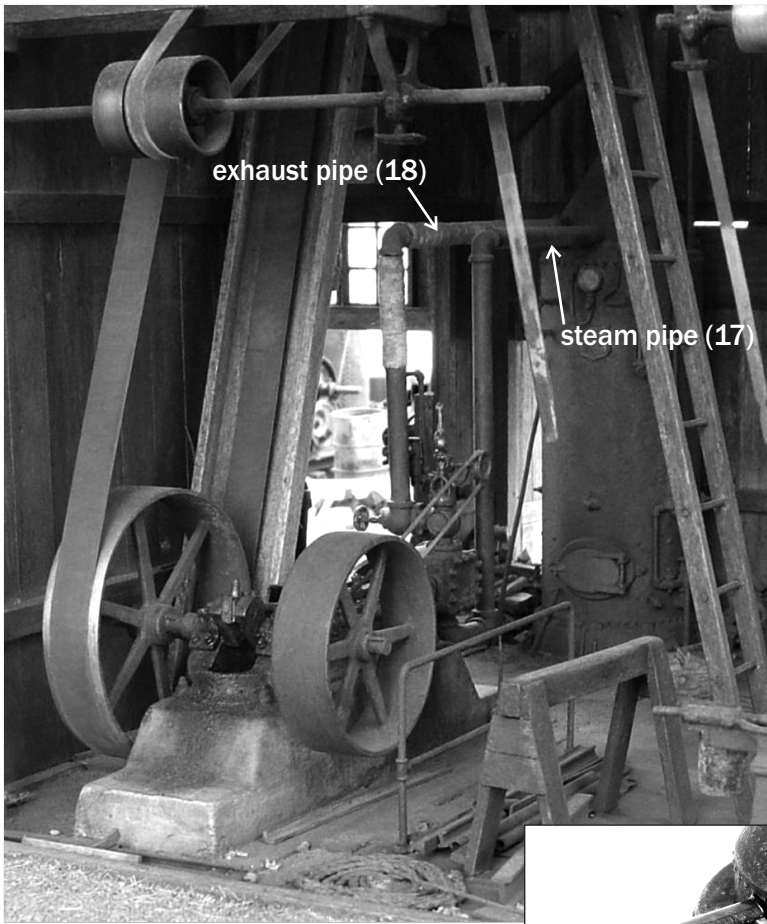
Paint the resin boiler (2) and flue (3) with a mixture of 80% Grimy Black/20% Boxcars Red. Once nearly dry apply a random layer of powdered artist chalk. I used a dark umber - nearly black. This gives the boiler a bit of texture. Once dry give the boiler and flue a dry brushing using a random mixture of Floquil Gun Metal and Graphite. Just enough is applied to give the boilers details a realistic sheen.

Drill all seven hand hole lids on the boiler then epoxy the seven crabs (5) in place. Drill the boiler to fit the two blow off cocks (7) then epoxy them in place. Drill, fit, then epoxy the try cocks (6) in place. Drill the gauge cocks (8) to fit the gauge glass (25). The gauge cocks have the small notches or wings on each side. Snip the head of the blank pin off then cut it to fit between the gauge cocks and epoxy all three in place. Now you can cut the gauge guards (20) to fit the notches and epoxy them in place. Drill the boiler to fit the steam gauge (11) then drill the steam gauge and boiler to fit the syphon tube (19). Bend the tube to shape and paint the face of the gauge a dirty white. Now epoxy them in place.

Temporarily set the boiler now in its intended location in combination with the mill engine (kit ME-812) to facilitate the fitting of the steam and exhaust pipes (17) (18) along with the alignment of the resin flue head/bonnet casting. The section of steam and exhaust pipe in this kit along with those in the previously mentioned mill engine will have to be cut to suit your particular installation. Ells (10) are provided to

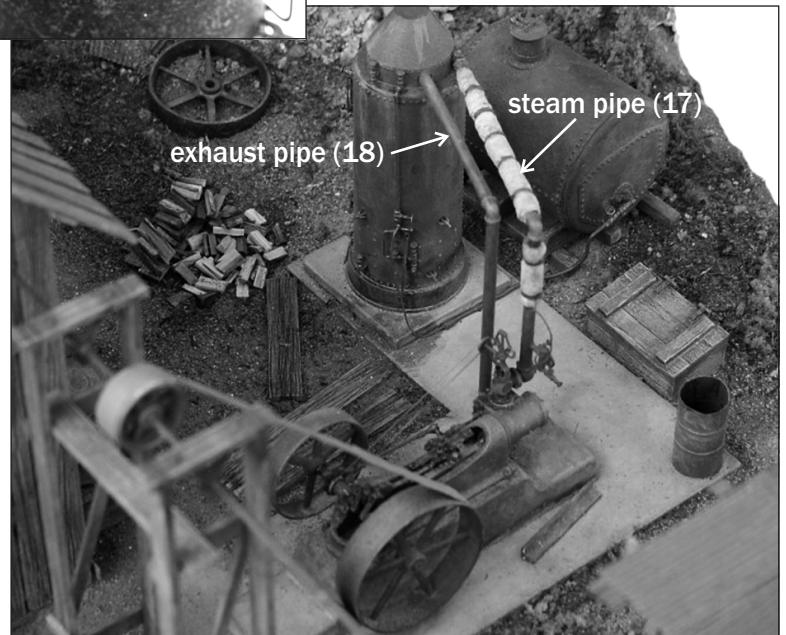
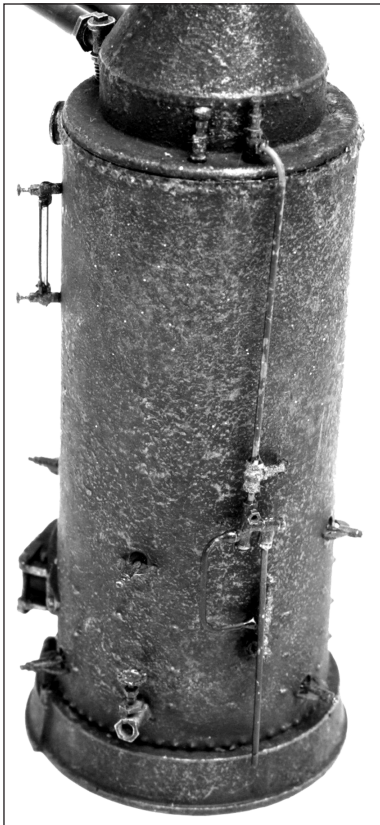
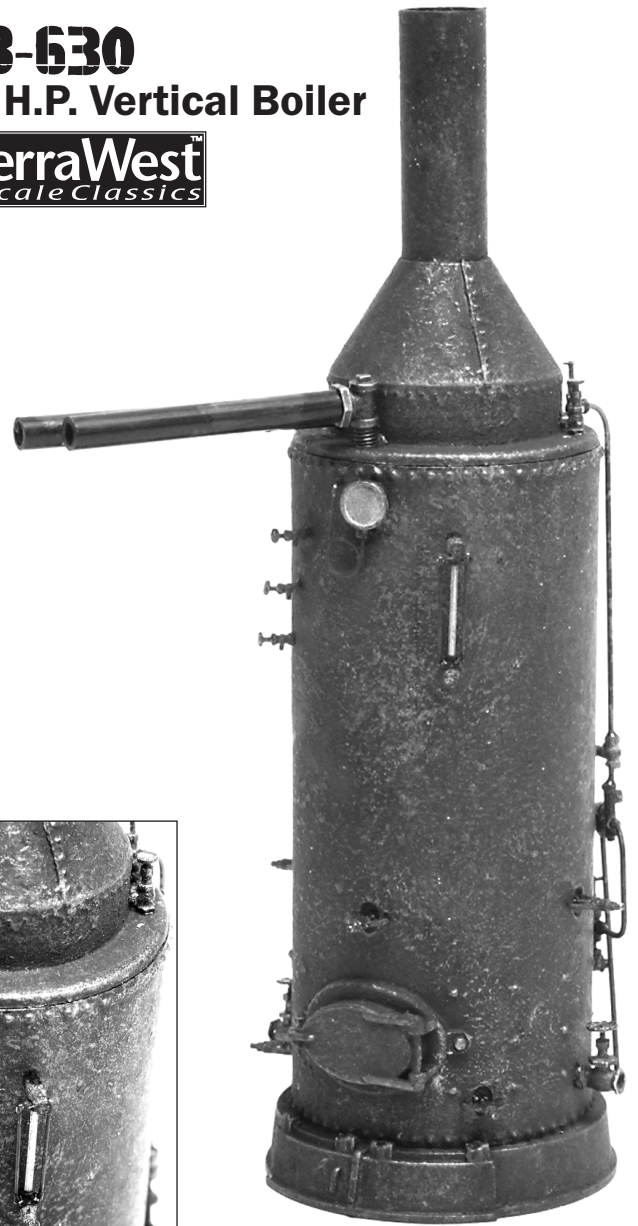
connect the vertical and horizontal sections. Pictures are provided in these instructions as well as on my website of both the boiler and mill engine correctly connected. The exhaust pipe will terminate directly in the pre drilled hole in the side of the bonnet. Check the fit now. The pipe must enter the bonnet radially as shown in figure a. Figure b as well as the photographs on the following page illustrates how to align the exhaust and steam pipes so they do not interfere with one another. This is met with the following conditions. First, the lower section of the exhaust pipe (No. 22 in the mill engine kit) should be positioned away from an imaginary center line between the steam chest and boiler. Second, the flue head is positioned on the boiler so the hole for the steam tee (9) is on the opposite side of that imaginary centerline. This will allow you to align the bonnet to the exhaust pipe correctly. One final consideration is the eventual location of a source of water. A supply pipe (.020 brass wire not supplied) is connected to the injector (15) at position c indicated on the drawing and visible in the model Brian constructed. Once you are satisfied with the alignment and fit of everything epoxy the flue head/bonnet casting to the top of the boiler.

The blower valve (12) and injector steam valve (13) can be located anywhere on the flue head, preferably where they will be convenient to the operator but avoiding the steam and exhaust pipes. Locate and drill holes for their stems on the flue head. Snip off the end of the discharge pipe on the blower valve so it will be flush on the bonnet then epoxy it in place. Assemble the entire feed-water system first by drill out the holes for the piping (.020 brass wire in the following parts: injector steam valve (13), globe valve (14), injector (15), and delivery valve and tee (16). Form the injector steam pipe (21) with a right angle bend at the top where it enters the injector steam valve. It is 66" long after the bend with the globe valve near the bottom just before it enters the injector. The delivery pipe (22) has two right angle bends 14" apart. The upper leg is 4" long and the lower 10". The lower leg is also displaced approximately 10° to the left of the upper when viewed from above. The overflow pipe (23) is 2" long. Once you are satisfied with the fit of everything on the boiler, epoxy the globe valve, injector steam pipe, and injector together. Once set epoxy the delivery pipe and delivery valve and tee in place. Set the injector steam pipe in its mounting hole on the injector steam valve and spot the location where the stem on the delivery valve and tee enters the boiler. Be sure the assembly is nice and straight. Drill this hole then epoxy the assembly in place. Epoxy the overflow pipe once the assembly has set.



Modeling and photo courtesy of Chuck Doan

VB-630
30 H.P. Vertical Boiler
SierraWest
O Scale Classics



sierrawestscalemodels.com

Modeling and photo courtesy of Brian Nolan

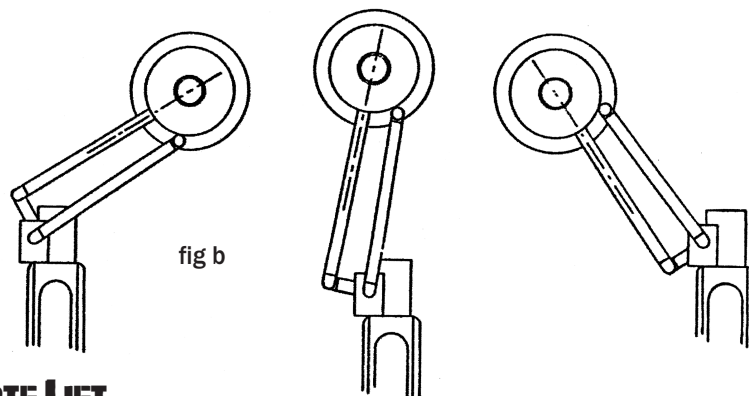
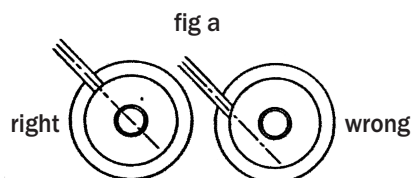
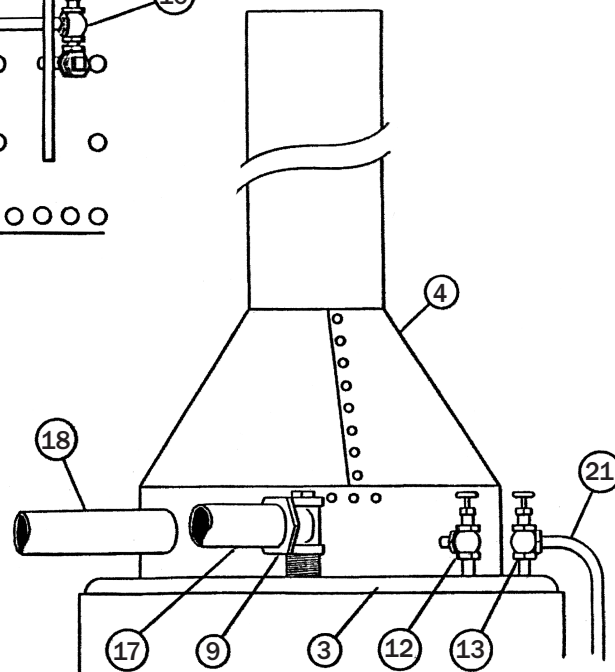
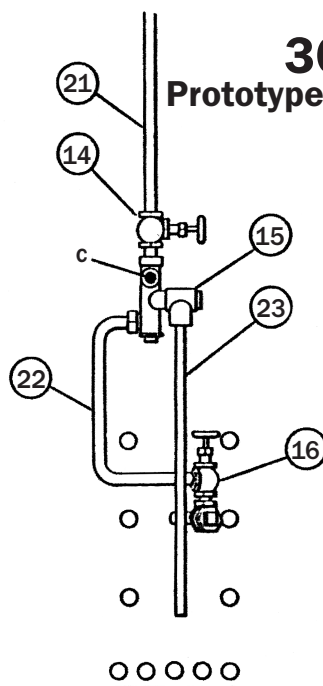
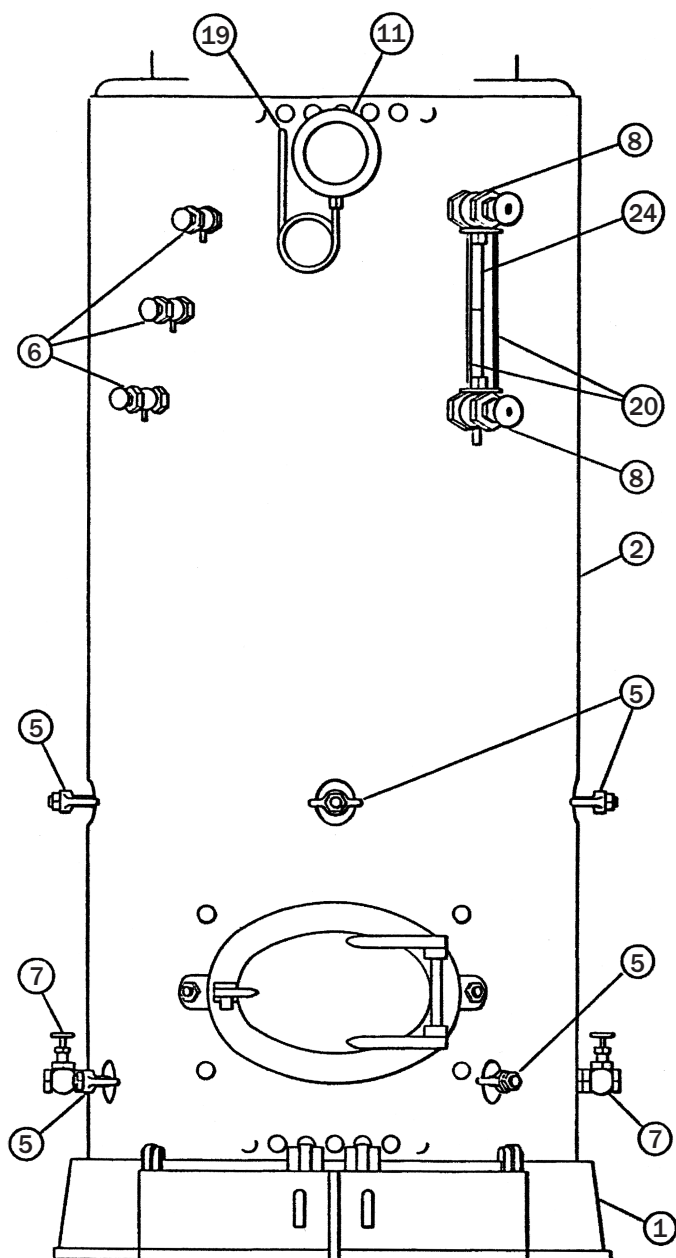
VB-630

30 H.P. Vertical Boiler

Prototype made by Sumner Iron Works
of Everett, Washington

SierraWest
O Scale Classics

© Brett Gallant



PARTS LIST

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|----------------------|-----------------------------|----------------------------------------------|
| 1. ash pan (resin) | 10. ell (2) | 18. exhaust pipe (brass tube) |
| 2. boiler (resin) | 11. steam gauge | 19. syphon tube (.010 brass wire) |
| 3. flue head (resin) | 12. blower valve | 20. gauge guards (.010 brass wire) |
| 4. bonnet (resin) | 13. injector steam valve | 21. injector steam pipe
(.020 brass wire) |
| 5. crab (7) | 14. globe valve | 22. delivery pipe (.020 brass wire) |
| 6. try cock (3) | 15. injector | 23. overflow pipe (.020 brass wire) |
| 7. blow off cock (2) | 16. delivery valve and tee | 25. gauge glass (blank pin) |
| 8. gauge cock (2) | 17. steam pipe (brass tube) | |
| 9. steam tee | | |