

Working with the SierraWest 3D Printed Blacksmith Set

by Brett Gallant

Please handle these parts very carefully! While I use a high strength tooling resin that is very flexible and strong, these parts contain incredibly fine detail that must be handled carefully to prevent damage. Before you begin construction be sure to download: *“Working with SierraWest 3D Printed Castings”*. These instructions cover all of the basics and provide essential information you will require before proceeding. Also be sure to view the video on *“Chipped Paint Effects”* posted on my videos page. As a side note, there is a wealth of information online about setting up and prototypically arranging the Blacksmith Shop components. That will not be covered here.

General Notes

Begin by preparing and priming the parts as outlined in the *“Working with SierraWest 3D Printed Castings”* download. Allow the primer to fully cure before proceeding. I prime almost all of my parts with a quality flat black spray paint. One exception, I primed the Forge with a gray primer to represent the mortar color. Except for the primer, all paint used is AK Interactive 3rd Generation water based paint. (Unless otherwise noted). As with all SierraWest 3D Printed parts, the supports are removed in house. On detailed castings you may find a few very fine, thin supports that are easily removed with a pair of tweezers.

the Forge

Once the primer has cured, use a reamer to clear the hole in the side of the forge for the bellows boss as shown below. Start with a smaller reamer diameter than the bore hole and work your way up, one size at a time, testing the fit of the parts between sizes.



The forge is hollow with a true grate. It would be easy to install a “flickering” light feature to simulate the orange glow of hot coals.



To create the “tool hanger brackets” on the front and side of the forge, bend and cut the supplied brass wire to shape as shown. Blacken with a chemical blackener like what’s shown on the “University” link on my website. Use the bracket itself to spot the location where you need to drill the two shallow leg holes. Use the tip of a new #11 blade to start each hole. Switch to a small hand drill bit then drill the holes slowly and carefully. Use a couple tiny drops of CA (super glue) to secure the brackets. Be sure to leave enough space between the forge wall and bracket so the tools hang freely as shown.



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Next paint the forge. The reality is that every working forge would be completely black from soot. I used dark red and dry brushed the face of the bricks leaving the gray primer applied visible in the mortar lines. Black chalk is then applied as desired to the face to represent the soot. Grey is applied around the firebox door to represent ash.

the Bellows

Paint the bellows to represent leather. Use a darker shade of brown to paint the thin wooden frame that surrounds the bellows. Paint the square lip at the tip rust. Paint the main frame dark red then chalk weather the entire assembly. If you have the large blacksmith shop set, locate the piece of supplied stripwood and cut to length as shown. Use a few drops of CA and glue the chain hanger bracket to one end then chalk weather the wood and hanger. Really dirty them up with black and dark gray chalk powders. This sat above the forge and would be very dirty. Now blacken the supplied brass chain and cut to length as shown. Blacken it then CA it to the bracket as shown. Insert the wood into the bracket at the top of the frame, do not glue it in place yet then CA the other end of the chain to the bellows bracket as shown. In HO Scale please simply glue the last link to the top of the hole. Use a couple drops of CA to secure the wooden handle in place to the main frame bracket as shown.



the Tools

The blacksmith tools are supplied on a sprue. Simply grab the head of the tool and twist them off. Remove any support remnants with your finger. The horseshoes are removed by gently rocking them back and forth. Many of the blacksmith tongs have small supports at the end of the handle. These are cut away.



the Anvil

I used a small tree branch from my backyard cut to size to glue the anvil to. Cut away the bark then heavily chalk weather. Make the tool holders by bending more of the supplied brass wire. Drill shallow holes and CA them in place along with the desired tool. Once the tools are installed, epoxy the anvil to the stump as shown.



a few Loose Ends...

There are several sources for “packaged coal”. I use HO Scale graded coal for O Scale and N Scale graded coal for HO Scale. I feel the smaller size looks more prototypical. A few drops of white glue diluted with isopropyl rubbing alcohol and dripped over the coal will securely hold it in place.

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Two styrene tubes are supplied. The thicker is used for the forge stack, the thinner for the stove. Prime both flat black then chalk weather. Cut to length as needed then use epoxy to secure in place.

The wooden tub could be filled with anything or left empty like I did and hang several horse-shoes over the side. Most of the shoes would be hung on the shop walls.

Mix a little two part clear epoxy and carefully fill the quenching drum on stand about 2/3 full to simulate plain water. Mix more of the epoxy and add a drop or two of any silver metallic water based paint. Fill the quenching barrel with this mixture to simulate oil used in the tempering of metal.

The leather slag bucket would be filled with metal scraps. A simple way to simulate this is to squeeze several shades of metallic water base paint on your glass-topped workbench and spread them into a thin layer. Use a couple silver and a brass color. Allow to thoroughly dry then scrape these up with a single edge blade. Chop them into unidentifiable shapes and fill the bucket.

