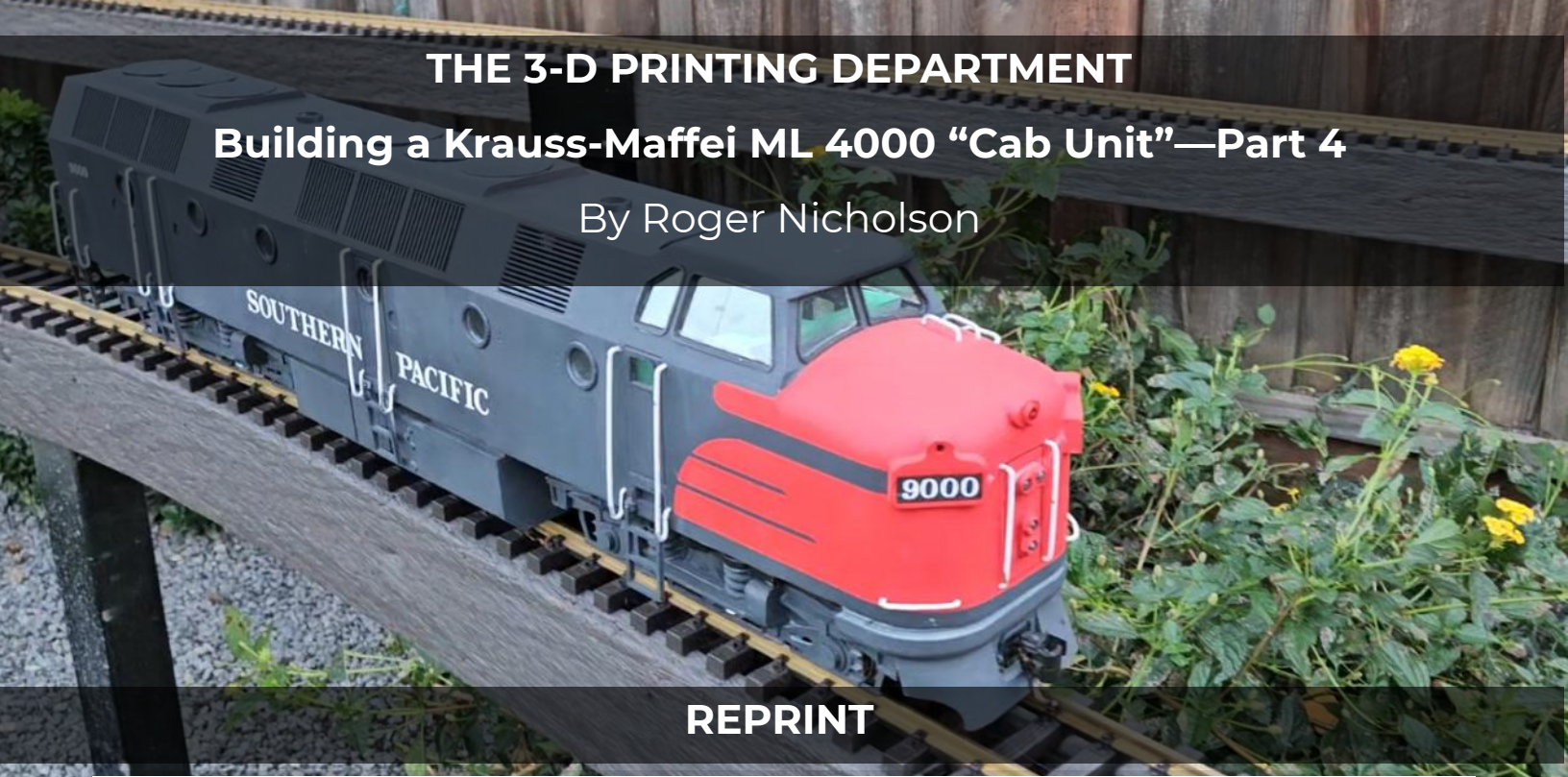


THE 3-D PRINTING DEPARTMENT

Building a Krauss-Maffei ML 4000 “Cab Unit”—Part 4

By Roger Nicholson



REPRINT

It was time to “road test” the Krauss-Maffei under different conditions. After all, it needs to actually function as a locomotive, not just sit around and look good. So, let the “road tests” begin!

Road Test #1: Colfax, California “Railroad Days,” September 14, 2025

The town of Colfax, California, celebrates the Transcontinental Railroad during their “Railroad Days” event. The Sacramento Valley Garden Railway Society (SVGRS), of which I am also a member, sets up their modular track and their “Wandering Railroad” to entertain visitors. I placed the KM on the modular layout and hooked it up to a 10-car train. I ran it for several hours in almost 90 degree weather. It performed very well, pulling cars reliably without any derailments. Visitors loved it because it’s so unusual looking. A few actually recognized it by name.





Road Test #2: San Leandro, California—G&O Garden Railroad, 20 September 2025

The second public showing of the prototype KM was at the BAGRS Annual Picnic at the G&O Garden Railroad in San Leandro, California. Once again, the locomotive performed very well, with no problems at all. The public seemed to like it a lot as well.



Road Test #3: Open House—Crystal Cove and Rose Railroad, October 11, 2025

The third public showing of the KM was at my own open house. It was quite popular, with most folks finding it hard to believe that it was 3-D printed in my garage. As you can see, we had quite a bit of fun with it that day. See it on YouTube here:

["Ride of the Snoopys," 11 October 2025](#)



Road Test #4: REGRS Open House—Martinez, California, November 2, 2025

I visited a REGRS open house hosted by BAGRS members David and Dawn Mease. Of course, I had my KM with me, and finally got to compare it to a professionally manufactured example. I designed the KM completely using online photos and diagrams. I think that I came pretty close. What do you think?



Road Test #5: BAGRS' Layout—Concord, California, November 2, 2025

As you can see, the KM has *really* been getting around. The final road test was on the layout of Ed and Stacey Baker. During all of these tests, the KM performed flawlessly.

So, what's next for the Krauss-Maffei ML 4000?

Now that I have a working and tested design, I'm building a few more. Four, however, will *probably* be my limit—I'm also in the process of renovating my kitchen cabinets, and my wife would prefer that I direct my time in that direction. Building *one* of these requires a bit of time and effort, but it has been quite rewarding. There are other locomotives that I want to design and build.

The later models include all of the design improvements made to the prototype during construction and testing. I'm still adding details, such as the horns and additional grab irons. One of the models will represent a later version of the "cab unit," including a plow, intake vents on the sides, and eventually rooftop tanks.

I hope to finish the KM design by the end of 2025. I will then post my design online for free, so that anyone can build one of these if they wish.

The next locomotive that I design will be EMD SD9 #5472 in the Black Widow paint scheme. The prototype for that one happens to be only a few miles away from me over in Niles Canyon. Stay tuned! ■

