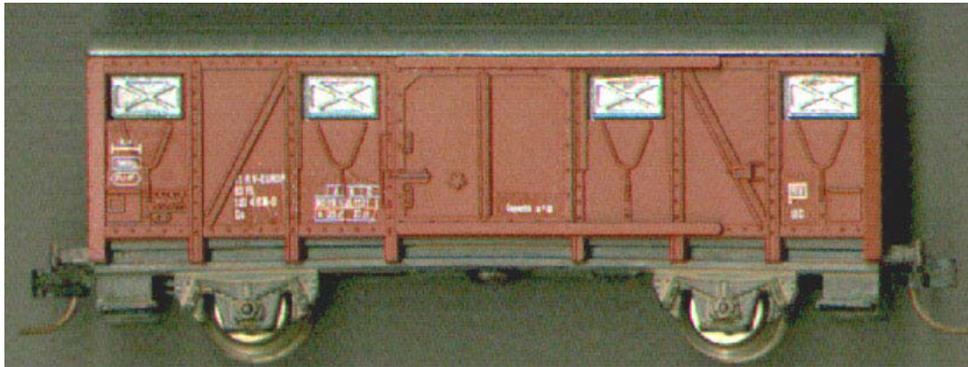


# KITBASHING 101:

## Modifying Lima's Gs Closed Wagon to More Closely Represent the Prototype

by Blaine Bachman



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Here's a very simple conversion that is well within the capabilities of even the most inexperienced modeler. With just a few tools, you can fix Lima's error and have an accurate model of this common closed car. As with all how-to articles, read this one beginning to end a couple of times before you start.

### Lima's Gs Wagon



The Gs type of car is a UIC (*Union Internationale des Chemins de fer*) design that was reproduced, with some variations, for many of Europe's railway companies. Lima's model is pretty decent right out of the box. Comparing it to similar offerings from Rivarossi/Arnold, one does notice that the details are a bit heavy, but considering the price (when in production, these models sold for just a few dollars) the compromise is acceptable.

More noticeable is that Lima chose to model the car with the multi-panel roof that is common in Germany, but non-existent on Gs cars built for the Italian Railways (FS – *Ferrovie dello Stato*). Also, as was common practice in the "good old days" of plastic modeling, Lima duplicated the various painted markings via raised lettering cast directly into the plastic body.

A little background on car classification nomenclature: **G** indicates a closed (box) car of standard design having eight or more ventilation panels, a load limit of 25 tons, and an inside

length between 9 and 12 meters. The small 's' indicates that the car is able to travel at speeds up to 100 kilometers per hour.

To improve the Lima car, we're going to smooth the roof, remove the molded-on markings, paint the car and decal it correctly, and add a fabricated step to each side of the car under the sliding door.

### **Gather the Needed Materials...**

For each car you will need:

- One Lima Gs box car
- *DecalENNE* #160-01 Decal set (enough to do several cars)
- Detail Associates #2502 (0.008" diameter) brass rod and #2524 (0.010x0.030) thin brass strip

### **...and tools and supplies:**

- Hobby knife with chisel blade
- Pin vise and a small (#70 – #80) drills
- Box Car Red paint (ATSF Box Car Red)
- 10-20W Soldering Iron, flux, and solder
- CA cement
- Small flat blade screwdriver
- Silver paint

### **Preparation:**

Remove the roof casting from the car. The roof and the eight vent covers (four on each side) are a single casting and the covers pop into the rectangular holes on the body thus keeping the roof in place. You'll have to use a blunt object to carefully press the vent covers, little by little, into the body and up, thus releasing the casting. Approach this process from one side of the car only; once all four covers are clear of the inside of the body casting, the roof can be tilted up and removed.

Remove the screw from the underframe, remove the underframe and car weight, and set aside. Depending on the vintage of the model you may find a metal strip between the screw and the underframe – this serves as the coupler box cover; be careful when removing it so you don't lose any parts.

Fabricate each side step using one piece of flat brass and two pieces of brass rod. If you're doing several cars, set up a 'mass production' process by cutting several of the steps and lining them up long edge to long edge (as if you were laying brass crossties) and about 1/4" apart on a piece of masking tape. Then place two pieces of the rod across the steps (as if you were laying rail on the 'crossties'). Lightly flux each joint and touch each with a well-tinned soldering iron.

After all joints are made, carefully detach the assembly from the tape. Clean any flux residue from the metal using denatured alcohol and cut each step from the next using flush-cutting nippers (or a fingernail clipper) so that you have several U-shaped assemblies. With the joints on the underside of the step, bend the brass rod up at a 90-degree angle to form a step with attached hangars.

### **Body Modifications:**

Place a piece of medium-fine grit sandpaper on a flat surface and run the roof back and forth across it until all traces of the roof ribs are removed. As you do this, continuously roll the roof from side to side to avoid sanding any flat spots into it. To finish the roof off, hand sand it in water using progressively smaller grits of wet-dry sandpaper. Rinse the roof and let it air dry.

Use the chisel blade knife to remove the cast-on markings on each car side. These are found to the left of the door near the lower edge and consist of a grid-like feature in the lower right-hand corner of the first panel, and several lines of print in the lower right-hand corner of the second panel. Clean up the cuts by sanding (but be careful not to remove the vent actuator details).

### **Painting and Decaling:**

With the car disassembled, it's an easy task to respray the roof silver (or grey for a more oxidized look) and the body a box car red. Since Lima molded the box car in brown plastic (and to cover the areas where the molded on lettering was removed), you should paint the car body a box car red color. While there is an 'official' color used by the FS (similar to ATSF Boxcar Red), there's a lot of variety due to slightly different formulations over the years and because of fading and weathering.

The DecalENNE decals are printed in white on a light blue decal sheet. Since the clear decal material covers the entire sheet, you need to cut the individual decals out before soaking them in water. This looks like a problem since the decals are very hard to see. But here's a little trick: turn the decal face down and color the back side of the paper completely with a black 'magic marker'. You need to use one of the 'smelly' permanent ink ones like Marks-a-Lot brand – the washable markers just don't have the penetrating power.

After giving the decal the magic marker treatment, turn it over. You should now see that the black has bled through the paper making the decal quite visible. This is entirely in the paper – it has no effect on the decal itself. Cut each needed decal out and apply it in the usual manner. You'll probably have to give it a few extra treatments of decal solvent as the clear material is quite resilient.

Once all decals are applied and 'snuggled down' adequately, seal the body with a coat of clear.

### **Assembly:**

Reinstall the roof and reattach the underframe, trapping the weight between the underframe and the body.

Measure and drill two holes in the underframe, centered on the sliding door, to attach the side step. You can drill these holes in the bottom edge of the side frame member or in front of it. Trim the brass rod so that when installed, the step rides approximately one scale foot (0.075") below the door. Install the steps with CA. After the cement dries, paint the steps using the same box car red paint.

### **Decal Sources:**

Aftermarket decals are a rare commodity in the Italian marketplace and virtually nonexistent in N scale. However the set (cat # 160-01) used in this article is produced by *DecalENNE*, and available in the US from:

<http://www.decalenne.com/>

European modelers can obtain the decal from the *Amici Scala N* organization at:

<http://www.amiciscalan.it/>