

Kit K128 - Great Northern 36' Double Deck Stock Cars



Instructions

General

The general order of the assembly is in many ways up to the preferences of the modeler. There are also some things that are optional and require items not included in the kit. These are noted throughout the instructions.

Assembly Sequence

◇ The instructions follow assembly of a double deck car. To model the single deck variant, eliminate the addition of the deck.

◇ Begin by examining the castings. The side castings of the stock car require special handling and preparation. You may have your own preferred method for cleaning the castings to remove material between the side boards; what follows is ours. Begin by laying a piece of sandpaper (220 grit will work well) grit side up on a flat surface. One at a time, carefully rub the side castings back and forth over the sandpaper. It is important to use finesse rather than force. Your goal is to make the flash between the side boards uniformly tissue-thin so that it can be flicked out, without a great deal of force or effort. To achieve this, it is important to rub the casting on the sandpaper alternating the places where you apply pressure and checking your work frequently. While using a heavier grit sandpaper may be faster, it may also result, at best, in making a portion of a side board too thin or at worst, sanding “through” part of the casting. Slow and steady is the most prudent approach. Once you have removed the material between the boards, inspect the castings to see if there are any areas that require *careful* dressing with a file or scraping with the edge of a knife blade. At this point it is also worth mentioning that we do not recommend removing any of the material by slicing with a knife; it is too easy to err and accidentally cut something that is not supposed to be cut.

◇ With the sides cleaned and prepared, turn your attention to the ends. It should be a simple matter to rub the backs of these

Prototype photos courtesy of Aaron Gjermundson except where noted

castings on the same piece of sandpaper until the resin backing becomes thin enough to flick away. The ends have an angle along their edges into which the sides will nest for assembly. Take care that these angles are cleaned using a file; test fit the ends to ensure they easily accept the side castings. Note that there is a “notch” at the bottom that must be cleaned with a file as well. Once you are satisfied with the test fit of these parts, set them aside. *Do not assemble the sides and ends at this point.*

◇ In the same fashion as the sides and ends, clean the underside of the roof casting by rubbing on the sandpaper. The underside of the edges of the roof are recessed (like the car ends). Clean this recessed area with a file as it is where the top of the car sides and ends will meet the roof.

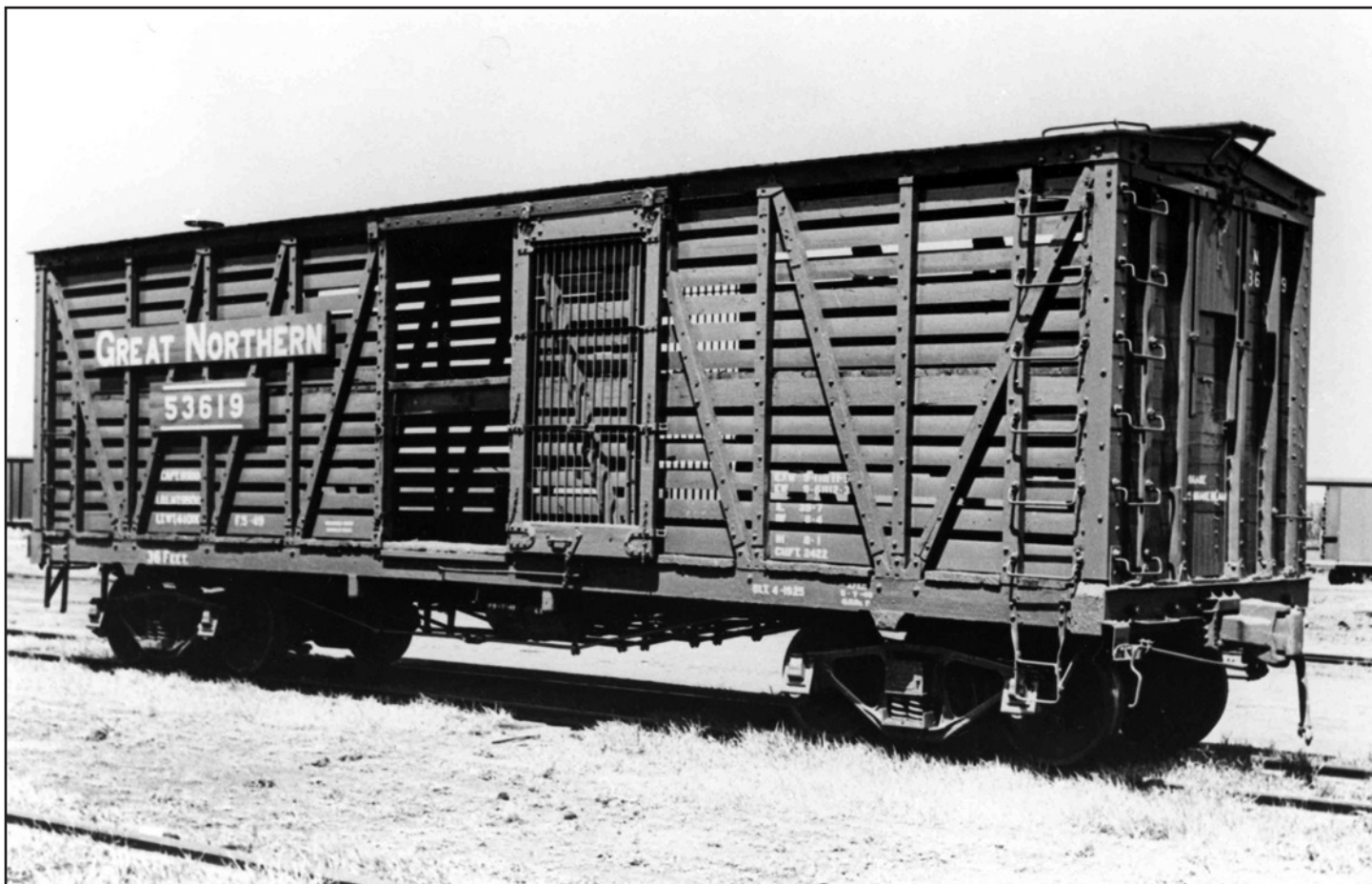
◇ The last area to be addressed prior to assembly of the main components is the fit of the floor and second deck through the side boards. The ends of the floor and deck boards will extend through openings in the sides. Some additional cleaning of the side castings and trimming of the boards in the floor and deck castings may be necessary. When satisfied with the fit, set these parts aside.

◇ Adding weight to an “open” car of this type requires planning if it is to be concealed. Weighted livestock is one option. Another is to add thin lead sheet to the floor and/or deck in a way that the side boards will conceal it. It should not be added to the center of the car as it may be visible through the door. Whichever option you choose, add the weight at this time.

◇ Assemble the main components. Glue one side to one end casting using ACC. Ensure that top of each side and end are aligned. Continue by gluing the other side and end corners to complete the “box” *while including the floor and deck castings inside the box. They must be added before the box is completed.* At this point you should have an open top assembly of the sides and ends with the floor and deck castings “inside” the box. Add

SPEEDWITCH MEDIA

speedwitchmedia@gmail.com — www.speedwitchmedia.com



the roof casting, securing with ACC.

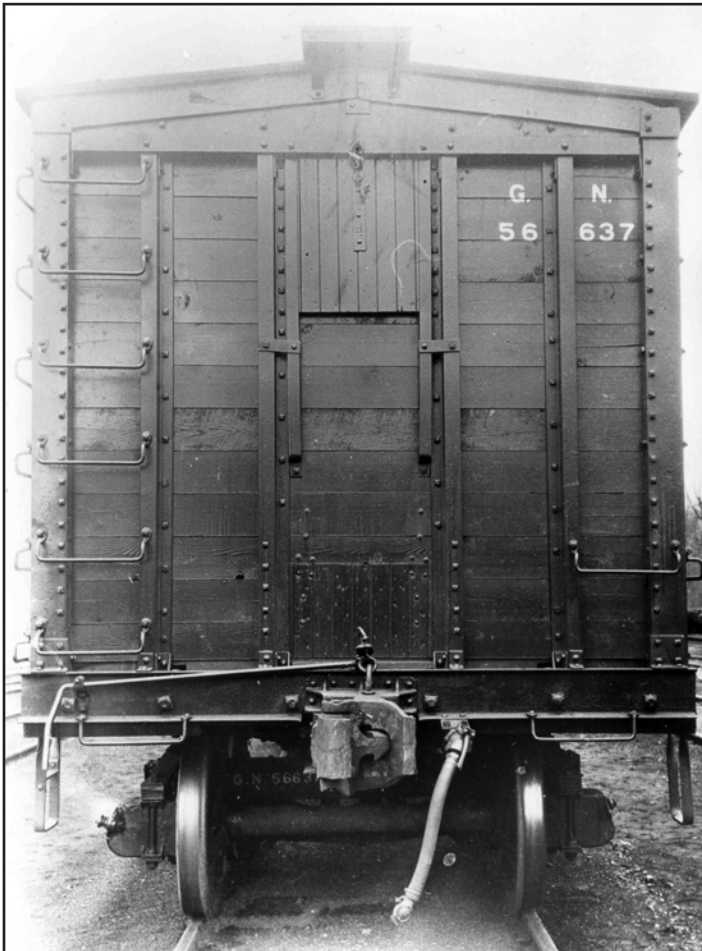
◇ Add the grab irons. Drill the holes for the grab irons with a no. 79 drill bit. Add the grab irons to the corners of both sides, the ends, and the end sills. Trim the legs before attaching to the car body. *Note that the pilot model was erroneously built using straight grabs in all locations.* The “ladders” of grab irons at the right edges of the sides, the left edges of the ends, as well as the grab irons on the end sills and right edges of the ends should all be drop grab irons.

◇ At this point, it is necessary to choose the way that the truss rod underframe is constructed. There are those who choose to assemble the parts and then attach the completed underframe into the body and there are those who prefer to add the underframe casting first and then detail it once it is added. The benefit of the former is that it is easier to “tension” the rods, but the crossmembers and bolsters may not be perfectly aligned at their respective spots under the sides. Detailing once the underbody casting is added to the body means that everything should be aligned, but tensioning is a little more challenging (but not overly difficult, as will be demonstrated), but the other issue is that the ends of the “rods” may be visible inside the car body as it is very challenging to trim them through the limited access available. Continue reading to understand both methods and then make your choice. There are a few common steps that will be highlighted first.

◇ Assemble the bolsters. Due to their shape, the bolsters are cast as halves (quarters really since there are two assemblies

for each end of the car!) that must be assembled. The best way is to carefully sand the backs of them on the sandpaper used in previous steps. Once the flash has been removed, put the two pieces together between your thumb and forefinger. Carefully align these pieces so that they mirror each other with no overhang or misalignments. While holding, dab ACC in a couple of places (preferably in places where your thumb and forefinger are not located!) That will suffice to tack them together and you can then add ACC to the remainder of the joint. Repeat for the other three bolster pieces. Sand the crossmembers to remove flash from the edges. Finally, sand the brake cylinder/reservoir brackets to remove flash.

◇ **The pre-assembly method:** test fit the underbody casting into the car body noting that there is an “A” and a “B” end. One outward facing side of the center sills has detail cast on it. If looking at that face, the “B” end is to the left and the “A” end is to the right. On the car body, the “A” end has the small door in the middle of the top of the end. Make sure these are oriented correctly. The fit of the underbody casting should be “loosely snug.” If too tight, remove a little material with a mill file. If too loose, strip styrene can be added to the edges of the underbody. You may have to remove material using a file or sandpaper. If so, work slowly removing material from both sides of the casting. Once satisfied, remove the underbody casting. Drill the bolster “bosses” for trucks using a no. 50 drill. A 2-56 screw will self-tap into a no. 50 hole. For trucks, suitable versions are the Buckeyes, available from Tahoe Model Works. With the underbody casting placed inside the carbody, glue the bolsters and crossmembers to the underbody casting (but not to the bottom of the car sides; the underbody casting is “in” the car body to aid in locating the underbody details, but since the underbody casting is not being glued in place yet, only glue the crossmembers where they touch the underbody and not the sides!) The detail on the crossmembers face opposite ends, meaning the crossmember on one side of the center sill “faces” the opposite end of the car as the crossmember on the opposite side of the center sill. Once these pieces are tacked in place, remove the underbody casting. Add the bolster cover plates. The holes in these fit over the truck mounting “posts”. The order in which the brake detail and truss rod detail is added is largely dependent upon individual preferences; ours is to complete the brakes first followed by the truss rods. Add the KC or AB brake system, using the photos and diagrams as a reference. For the KC system use both cast resin brackets, but for the AB system only use the cylinder bracket. Note that the pilot model uses brake levers created from styrene with turnbuckle “clevises”. You can use the included Tichy parts or replicate the details as shown in the instructions by raiding your styrene and parts bins. If you choose to add the train pipe and the pipe between the dirt collector on the KC system or the pipe between AB valve with dirt collector, use 0.015" wire. The piping between the AB cylinder and AB valve is represented with 0.012" wire and the brake rods (attached to the levers) are 0.010" wire. To add the truss rods, begin by adding the two queenpost castings



to the crossmembers. Using the location of the queenposts, drill holes (76 or 77 drill bit should suffice) in the underbody casting to accept the truss rods (fishing line). There should be six holes in each end located 18 scale inches from the edge of the bolster. If you are creating “see through” turnbuckles, then glue pieces of fishing line into the ends of six turnbuckles. You will need 12 pieces of fishing line (two per turnbuckle) with sufficient line plus a little extra to reach the holes that were just drilled adjacent to the bolsters. If you are not creating the “see through” effect you can simply thread the turnbuckles onto the fishing line as you go. Glue one end of fishing line into a hole. If creating the see through effect, take care that the turnbuckle is situated approximately halfway between the queenposts as you will not be able to adjust it again. Thread the end of the line into the opposite hole and into the turnbuckles. From the inside of the underbody casting, pull to create a taut truss rod and glue; don’t pull so hard that you pull the line from the turnbuckle (if you were creating the see through effect.) If not creating the see through effect, center the turnbuckle on the line between the queenposts and glue it in place. Repeat for the other five truss rods. Once the glue has dried, trim the excess line on the “top” of the underbody (the part that will face the inside of the car body) smooth and file or sand as necessary. Add the underbody casting to the car body and apply ACC around the perimeter to secure into the car body.

◇ **The post-assembly method:** Begin by gluing the underbody casting in place inside the car body. Of course, if the casting was not yet fitted for the body, tackle that first. Test fit the underbody casting into the car body noting that there is an “A” and a “B” end. One outward facing side of the center sills has detail cast on it. If looking at that face, the “B” end is to the left and the “A” end is to the right. On the car body, the “A” end has the small door in the middle of the top of the end. Make sure these are oriented correctly. The fit of the underbody casting should be “loosely snug.” If too tight, remove a little material with a mill file. If too loose, strip styrene can be added to the edges of the underbody. You may have to remove material using a file or sandpaper. If so, work slowly removing material from both sides of the casting. Once satisfied, remove the underbody casting. Drill the bolster “bosses” for trucks using a no. 50 drill. A 2-56 screw will self-tap into a no. 50 hole. For trucks, suitable versions are the Buckeyes, available from Tahoe Model Works. Insert the underbody casting into the car body and tack it in place with ACC at several locations. Then, flow thin ACC into the body/underbody joints. Add the bolsters and crossmembers. The detail on the crossmembers face opposite ends, meaning the crossmember on one side of the center sill “faces” the opposite end of the car as the crossmember on the opposite side of the center sill. Add the bolster cover plates. The holes in these fit over the truck mounting “posts”. The order in which the brake detail and truss rod detail is added is largely dependent upon individual preferences; ours is to complete the brakes first followed by the truss rods. Add the KC or AB brake system,

using the photos and diagrams as a reference. Pre-drill the parts if adding piping, no. 79 for the main piping and no. 77 for the pipe between the dirt collector and train pipe. For the KC system use both cast resin brackets, but for the AB system only use the cylinder bracket. Note that the pilot model uses brake levers created from styrene with turnbuckle “clevises”. You can use the included Tichy parts or replicate the details as shown in the instructions by raiding your styrene and parts bins. If you choose to add the train pipe and the pipe between the dirt collector on the KC system or the pipe between AB valve with dirt collector, use 0.015” wire. The piping between the AB cylinder and AB valve is represented with 0.012” wire and the brake rods (attached to the levers) are 0.010” wire. To add the truss rods, begin by adding the two queenpost castings to the crossmembers. Using the location of the queenposts, drill holes (76 or 77 drill bit should suffice) in the underbody casting to accept the truss rods (fishing line). There should be six holes in each end located 18 scale inches from the edge of the bolster. If you are creating “see through” turnbuckles, then glue pieces of fishing line into the ends of six turnbuckles. You will need 12 pieces of fishing line (two per turnbuckle) with sufficient line plus a little extra to reach the holes that were just drilled adjacent to the bolsters. If you are not creating the “see through” effect you can simply thread the turnbuckles onto the fishing line as you go. Glue one end of fishing line into a hole. If creating the see through effect, take care that the turnbuckle is situated approximately halfway between the queenposts as you will not be able to adjust it again. Insert the fishing line into the slot in one queenpost and glue with ACC. Now thread the end of the line into the opposite hole that you drilled, but not into the second queenpost (see photo). Pull and ACC into the second hole noting that the line will be “below” the second queenpost. If not creating the see through effect, center the turnbuckle on the line between the queenposts and glue it in place. Repeat for the other five truss rods. Once the glue has dried, “pop” the line up and into the second queenpost and glue in place. The line is flexible enough and this will create a taut, but still flexible “truss rod”.

◇ Now, turn your attention to the roof. Clean up the running board casting by carefully cleaning the underside of the part by sliding it on sandpaper until the gaps between the boards are tissue thin or fall away entirely. Carefully clean these gaps. Once the part is cleaned to your satisfaction, add a strip of styrene 1x4 to the underside of the end of the running board. Apply the running board to the roof, centering it both laterally and longitudinally. Secure it in place using a cement such as Barge cement (available at shoe repair shops) followed by an application of ACC added with a pin. Drill no. 79 holes adjacent to the nut-bolt-washer (NBW) castings on the roof for the corner grabs. Add the corner grabs, plus one eye bolt made from 0.008” per grab and glue in place using ACC. Add 1x3 styrene strip diagonal/supports between the underside of the end of the running board and the top edge of the end. Again, consult the photos.

◇ Add the doors to the car. The doors are modeled by gluing two resin pieces together after creating “bars” from 0.008” wire. Carefully clean the doors on your piece of sandpaper until the flash is tissue thin. Add pieces of wire across the small slots and affix with ACC. Once completed, add the second door piece and carefully glue the two pieces together, taking great care to ensure they are aligned. Once completed, the doors can be added to the car. The door guide must be bent from 0.012” wire. Chain can also be added (not included) as shown in the photos. A small u-shaped piece of wire can be used to attach the chain to the door and the other end of the chain can be threaded on to the guide *before it is added to the car side*.

◇ Add the brake detail to the end. Drill a no. 80 hole in the bottom of the retainer and glue that part to the top of the end as shown. Add 0.008” wire to simulate the retainer pipe. Add a metal sill step below the end sill as shown in the model photo to serve as a brake staff pivot. No. 75 holes must be drilled in the bottom of the end sill for this part. Remove the part and bend it outward slightly so that it extends slightly beyond the bottom of the end sill. File a notch in the top brake staff support (from the Tichy brake sprue) to receive the 0.015” wire brake staff and affix to the roof eave with ACC with the wire in place *resting in the brake staff pivot*. Orient the wire so that it is straight top to bottom and glue in place at the top of the end of the roof and at the bottom where it rests on the sill step (staff pivot). If adding uncoupling devices, bend them from 0.012” wire and attach with the wire eye bolts fashioned from 0.008” wire, using the model photo as a guide.

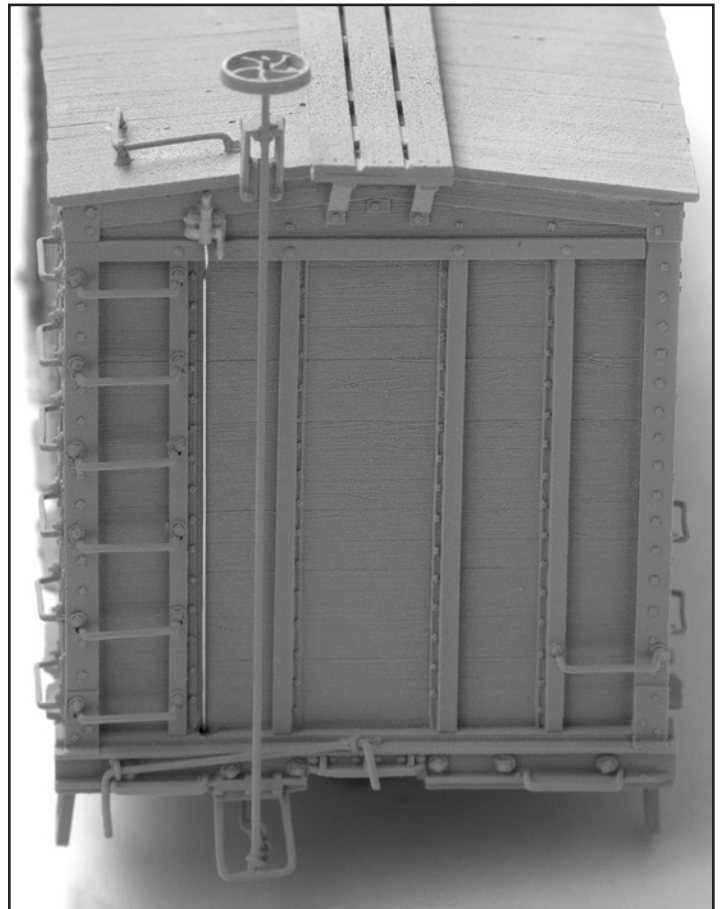
◇ Add the sill steps. Drill no. 75 holes at the corners for the sill steps. Drill the four holes closest to the corners first and then use them to locate the where the second holes should be placed. Do this by putting one leg of the step into the hole and using the other leg to mark where the second hole is to be drilled. After both holes are drilled, insert the steps and glue in place with ACC.

◇ Add the boards to the sides for the road name and car number per the photos of the prototype and model.

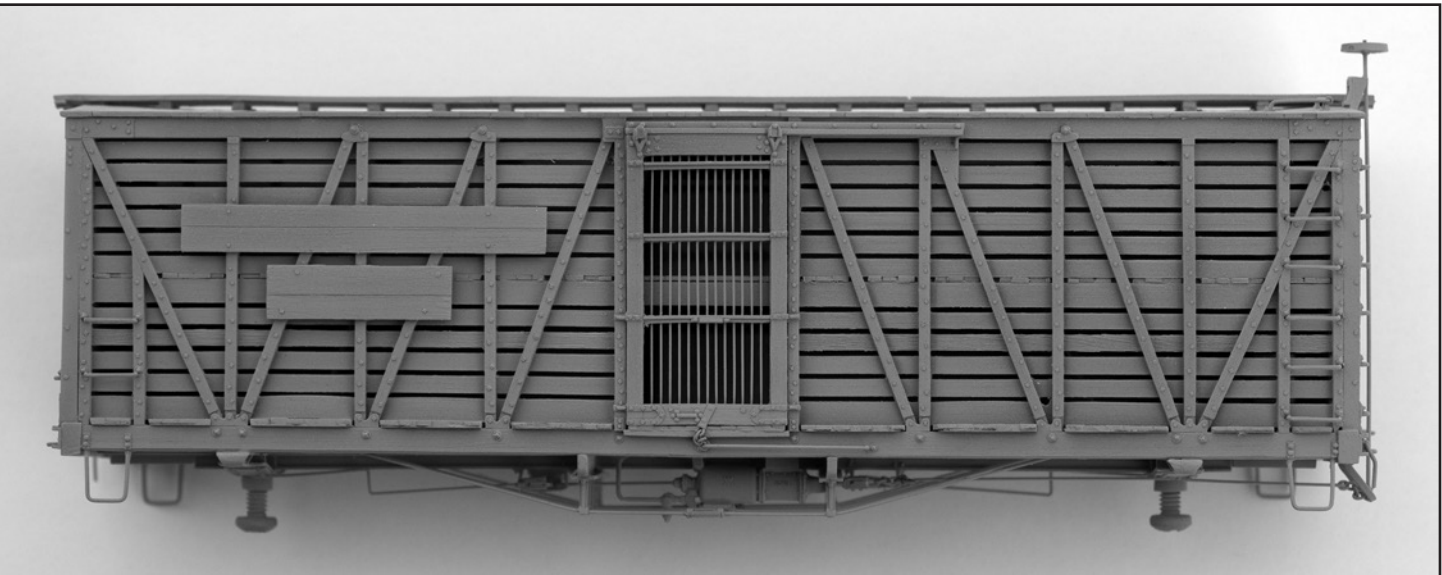
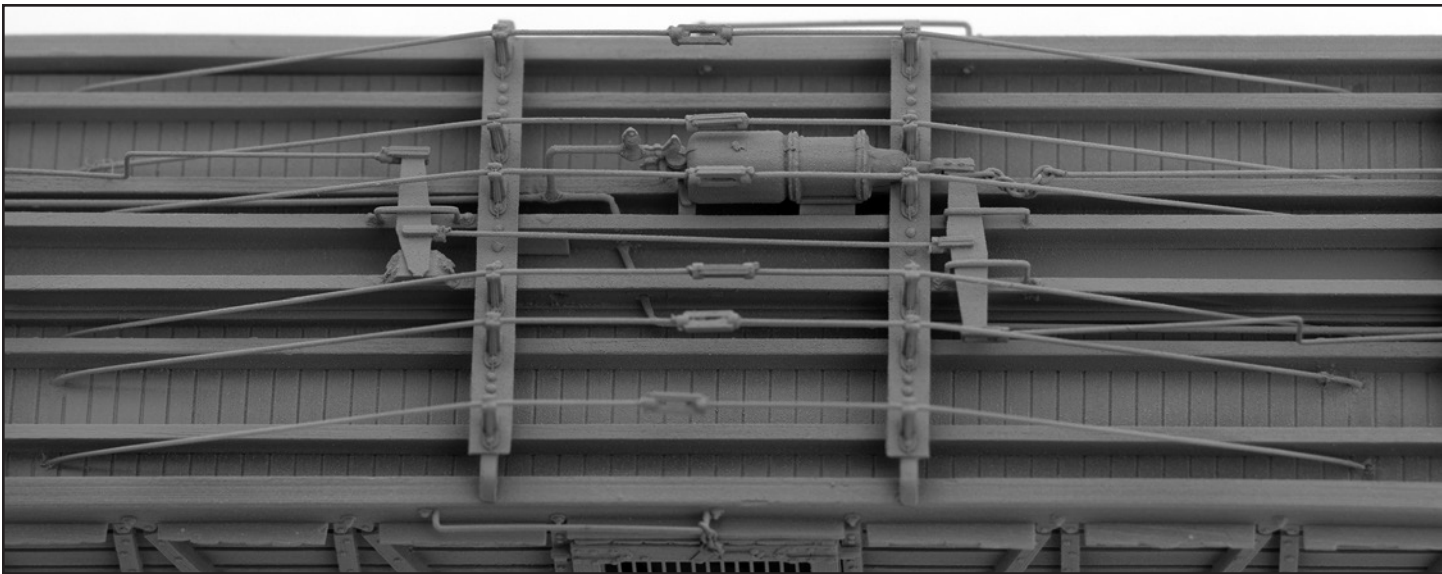
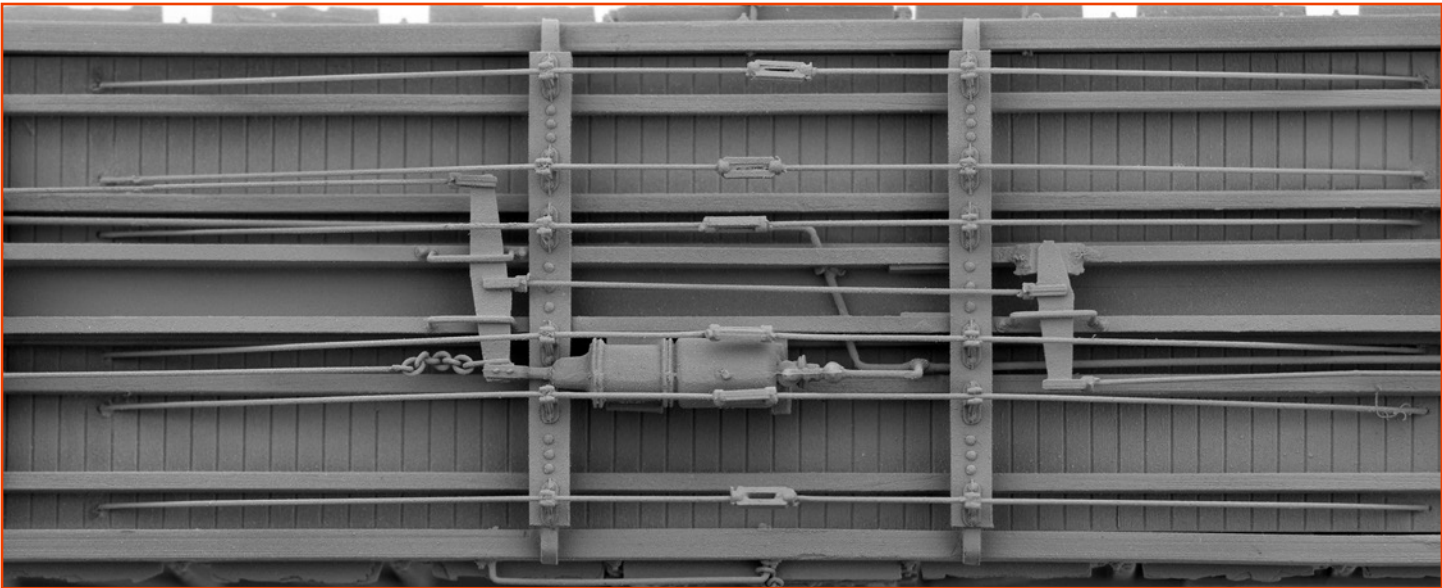
◇ Add the brake wheel to the brake staff using the photos to aid in location. Trim the excess brake staff wire flush with the top of the brake wheel.

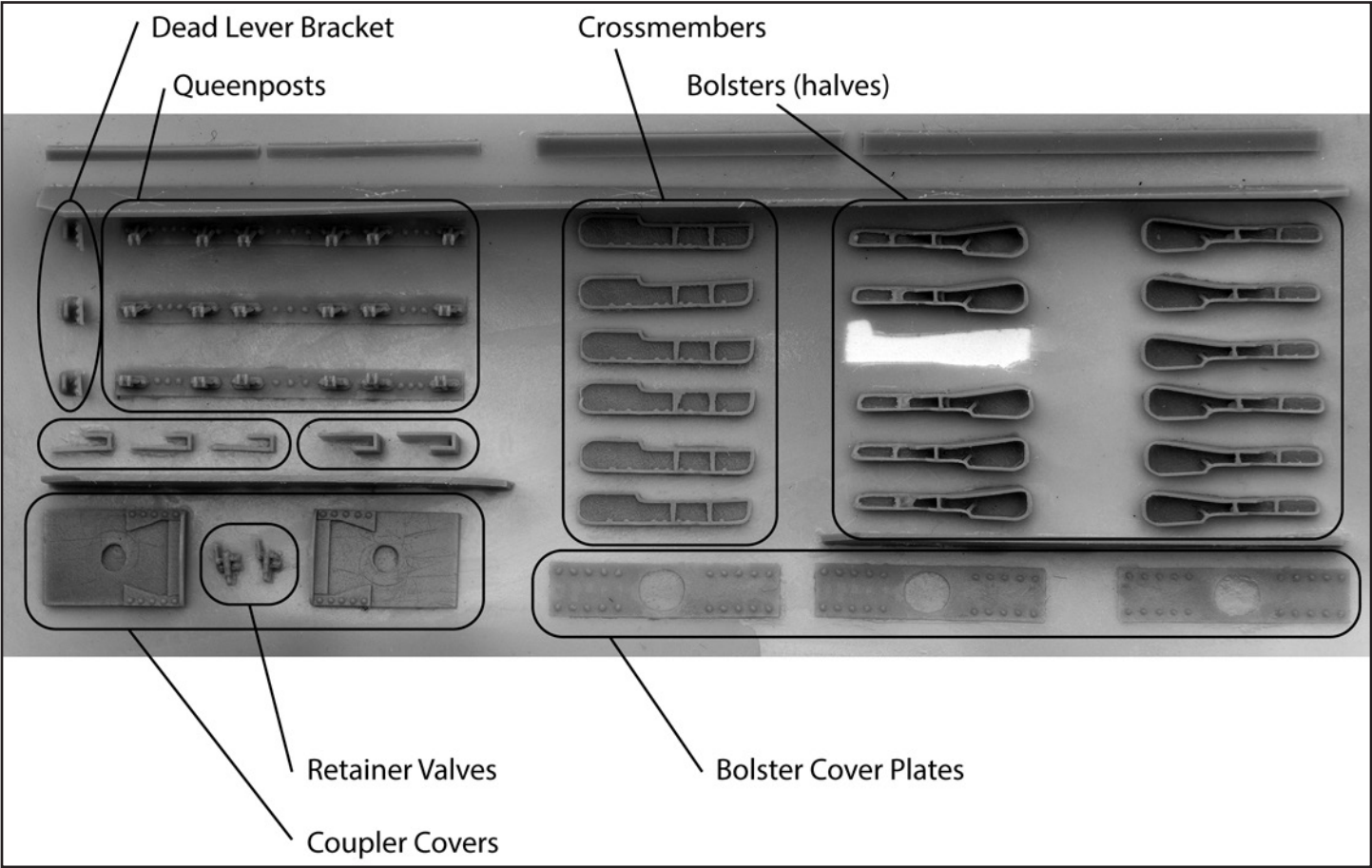
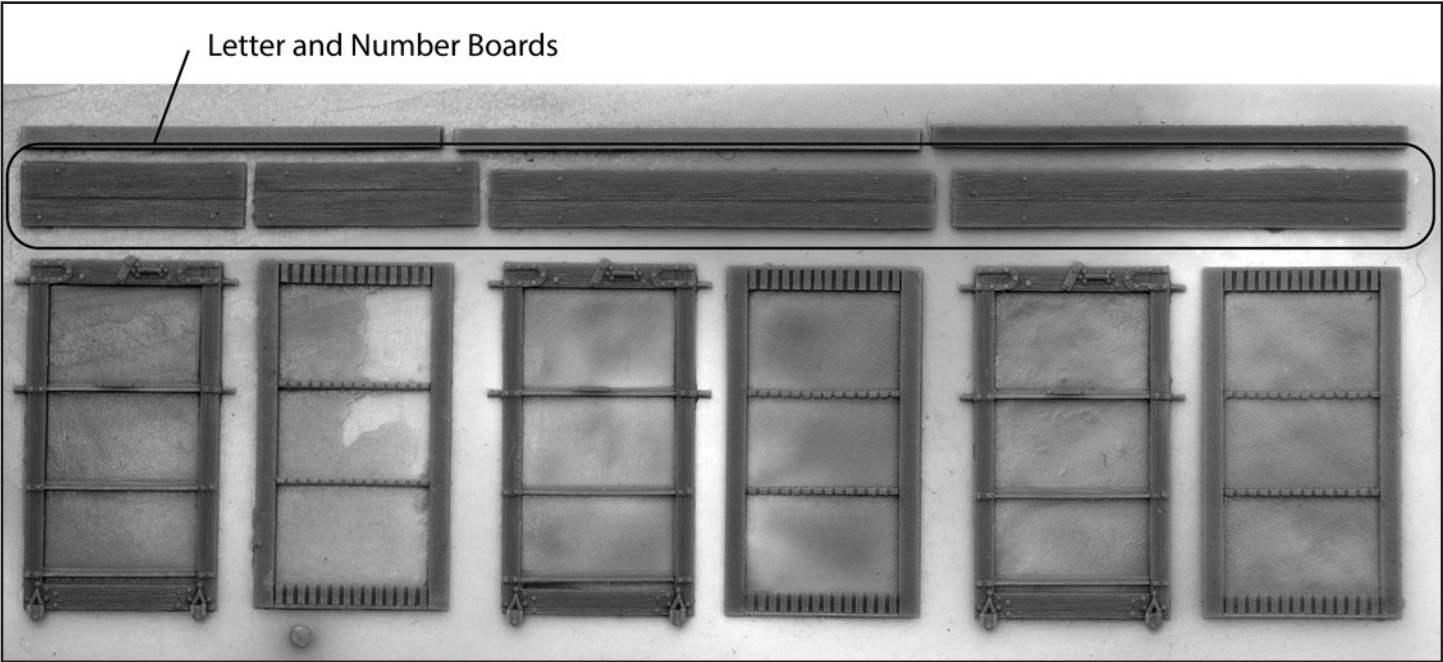
◇ Before painting the model, we recommend lightly sandblasting all metal (grabs) and engineering plastic surfaces (truck sideframes) to ensure that the paint will not chip or flake. This should be followed by a washing using liquid dishwashing detergent and a soft toothbrush. Rinse thoroughly and allow to dry completely. Prime the model with your choice of primer followed by a coat of deep oxide red, close to, but not quite tuscan. Add a gloss coat to aid in decal adhesion if using Floquil paints.

◇ For decaling, our recommended approach is to apply the decals with only water. After sliding them in place (with a dull object) let them dry *thoroughly*. After they have dried, apply decal setting solution by touching the edge of the decal with a brush that has the solution on it and letting capillary action pull the solution under the decal. Again, let the decals dry thoroughly. After they have dried again, using a sharp knife, slit any areas where there are bubbles or silvering. Add setting solution, Keep repeating until all traces of air are gone. Add a flat coat to seal the decals. Weather to your preference, add reweigh and repack stencils, and chalk marks, and your model is ready. Congratulations!



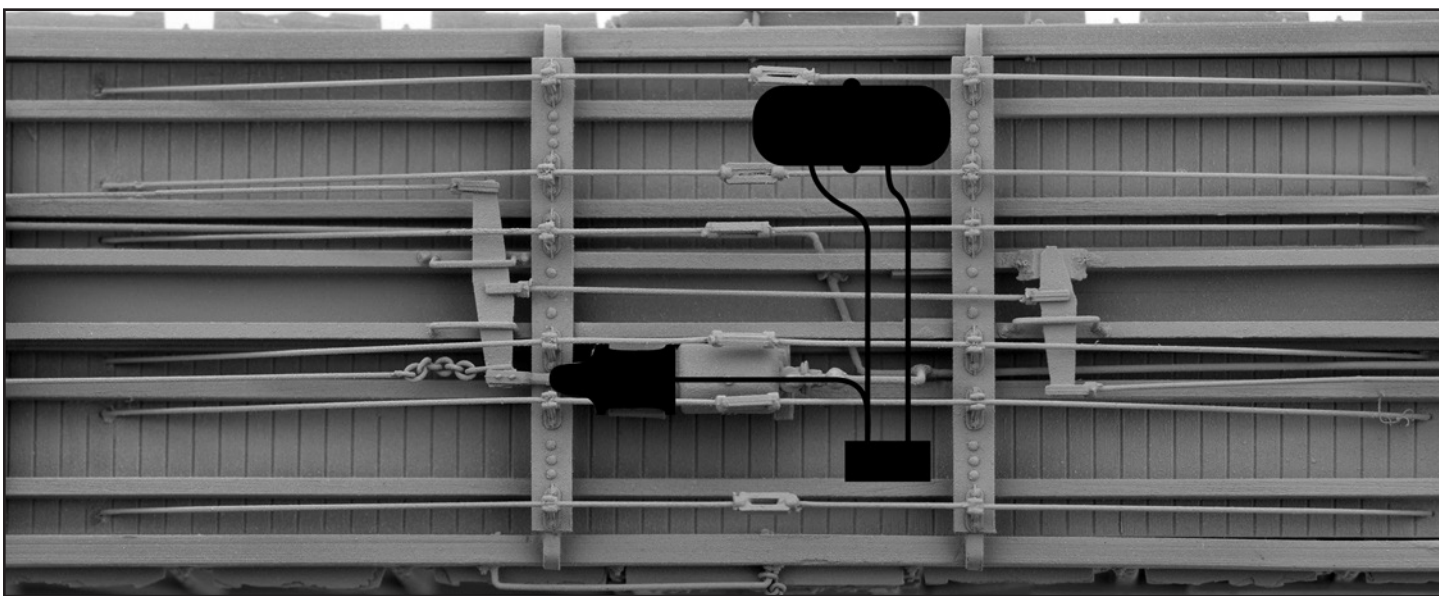
The image at right illustrates the location of the retainer valve and piping, the sill step/brake staff pivot, the uncoupling device, and the Tichy brake part, at the top of the roof eave, doubling as a brake staff support



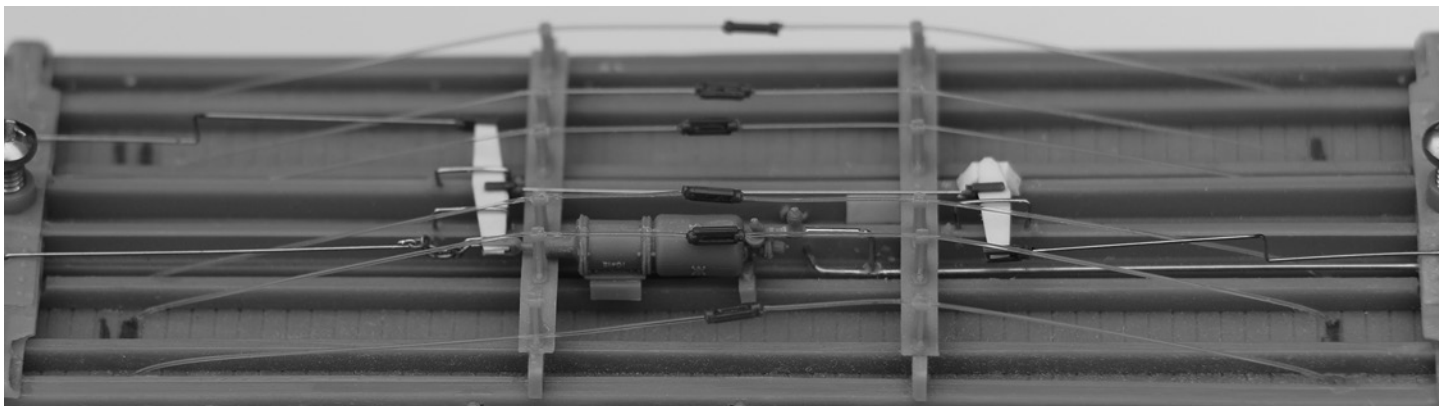




This photo illustrates the manner in which the door guide and chain are simulated. Also, note the mounting parts for the KC brake system as well as the other underframe details visible in this photo.



The graphic above illustrates, through an overlay, the location of the AB brake components if installing that system. The cylinder is at left, the AB valve is at bottom and the reservoirs are at the top. The black lines illustrate the piping.



This photo illustrates how to create the truss rods if following the “post-assembly” method. The truss rod closest to the lens in this photo has been attached in three places as described in the text of the instructions: the two holes and the slot in one of the queenposts. The last step is to push it up and into the slot in the second queenpost and affix it in place with ACC.



Great Northern 57713 is a single deck version of the 36-foot stock car common on the GN. Brush, Colorado, October 21, 1952, Col. Chet McCoid photo, Bob's Photo