

# **Instructions for assembling and painting a Southern Railway steel bay window caboose kit from Wright Trak**

By Bob Harpe

Compiled by Steve Smith, Allen Cain and JC Paschal

Edited by Dave Bott

All photos © by Bob Harpe

The time to begin construction on your new Wright Trak Southern caboose has finally arrived. I hope you were as glad to receive your model, as I was to get mine. Gary has produced for us a very fine kit from which to work. The end results will be worth every minute you spend building, detailing, painting and decaling this fine model.

Each of you has a set of instructions that came with your kit. In this project we will use these instructions, but we may also vary the steps to reach the finished model. Although not as expensive as a brass model of the same quality, each of us has spent our hard earned money to purchase this kit. I suggest that you work slowly and carefully so as not to make mistakes which will damage the looks of the model or render it useless. I will describe problems you might encounter, thereby saving you from having to purchase extra parts or an entire new kit. Scans of each step are included along with detailed instructions for each step.

These instructions will enable you to build either the as-built or rebuilt versions of the Southern cab. If you see a step number by itself, this will mean the instructions will pertain to both models. If you see a step number followed by "as-built" or "rebuilt", it will pertain only to that particular version.

## **Detail parts & tools you will need to build the Southern caboose in a given version.**

### **DETAIL PARTS AND PART NUMBERS:**

#### ALL VERSIONS

- .012 brass wire
- # 78 Kadee couplers
- Modelflex CB&Q Chinese Red, 16-153
- Modelflex Reefer Yellow, 16-10
- Modelflex Engine Black, 16-01
- Modelflex Milwaukee Brown, 16-45 (Brown scheme cabs)
- Scalecoat II Bright Caboose Red, 2073 (if you don't like the Chinese Red color)
- Detail Associates lift rings, 2206
- Detail Associates coupler lift bars, 6215
- Tichy AB brake set, 3013 (for extra brake details)
- Decal setting solution, your choice

#### AS BUILT VERSION ONLY

- Atlas 50 ton Bettendorf trucks, 185000 (as-built version)

#### RE-BUILT VERSION ONLY

- Atlas caboose trucks, 190000 (rebuilt version)
- Microscale decals, MC-4084 (rebuilt version)

### **TOOLS NEEDED:**

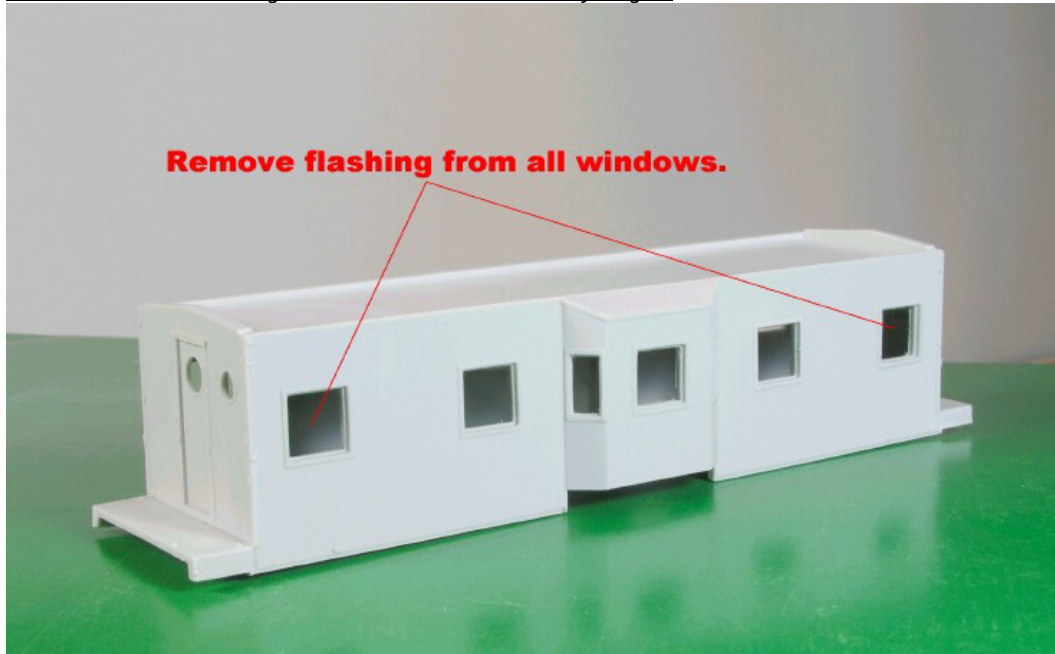
- Cyanopoxy (or your favorite ACC type adhesive – see note below)
- # 11 X-ACTO blades (several)
- # 80 drill bits
- # 77 drill bits
- .015 steel piano wire (file a sharp angle on one end for use as a drill bit. If you can find long shank .012 bits, then I would suggest using them instead.)
- 1/8<sup>th</sup> inch drill bit ( to drill hole for smoke jack)
- Two pairs of good quality needle nose pliers
- Small screw driver
- one pair of Xuron "orange handle" flush cut nippers
- Dremel or equivalent rotary tool w/small emery wheel

NOTE: I highly recommend using Cyanopoxy to build this caboose. I have used it on several Wright Trak products and it does an excellent job of bonding the detail parts together. The Cyanopoxy kit also contains a "de-bonder" so that if you make a mistake, you'll be able to unglue the two parts and then be able to reset them in their correct places. You can obtain Cyanopoxy from <http://www.coolchem.com>

## Step 1

Begin by looking at the scan for step 01 that may be found in the files section.

*Photo 1. Remove flashing from cab windows and body edges.*



Carefully remove all flashing from the cab windows and other areas of the model. I suggest using a new # 11 X-ACTO blade to prevent damage resulting from the use of extra pressure to these areas.

## Step 2

Carefully remove the two end sills from the casting web and attach to the caboose walkways. Please be very careful removing these end sills as they are very delicate toward their centers and they will break if pressure is applied to them.

You will note that there are 21 different holes to be drilled in both ends of the caboose. I suggest you mark each hole with a sharp pin and then drill each hole with a #80 drill bit unless noted (see note 2 below). Do not go larger than a #79 bit as we will be installing .012 brass wire in these holes. The holes to be drilled are:

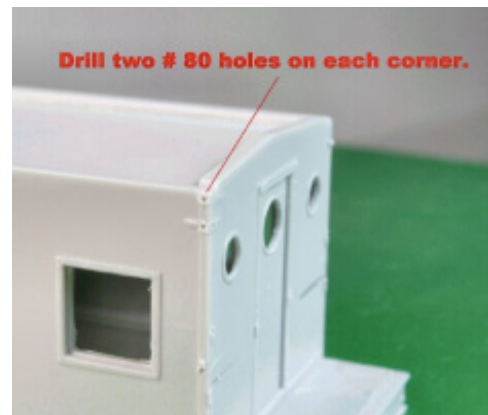
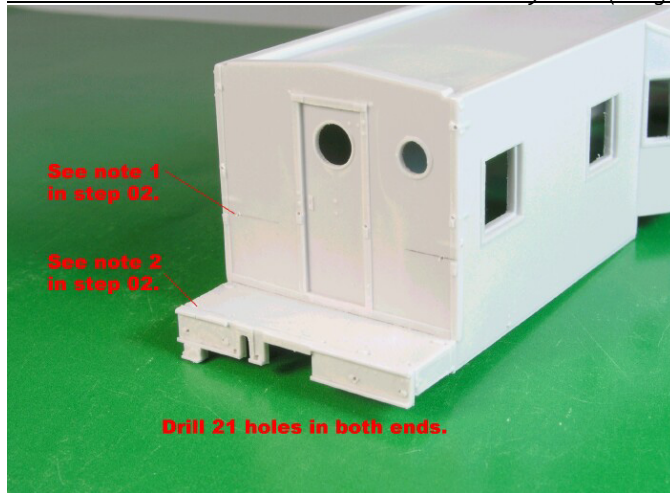
- 4 #80 holes on the end sills,
- 6 #80 holes for the curved platform handrails,
- 5 #77 holes on the edge of the platform for the end railings,
- 4 #80 holes for the two grabs at the top of the rear wall and
- 4 # 80 holes for the flag holders.
- 2 # 80 holes in each upper corner for the flag holders supplied in the Wright Trak kit. See the photo for these holes.

**NOTE 1: THE TWO HOLES-ONE EACH FOR THE GRAB IRON SUPPORTS-NEED TO BE MOVED IN SIX SCALE INCHES FROM THEIR LOCATION TOWARD THE DOOR. THE LOCATION INCLUDED ON THE MODEL IS VERY DIFFICULT TO WORK WITH WHEN YOU ADD THIS PART SO MOVE THESE HOLES INWARD TO MAKE FUTURE WORK EASIER.**

**NOTE 2: THERE ARE FIVE HOLES TO BE DRILLED ON THE PLATFORM FLOOR. MARK THESE HOLES WITH A SHARP PIN AND DRILL WITH A #77 BIT AS THEY WILL HOLD THE STAINLESS STEEL END RAILINGS, WHICH ARE A BIT LARGER THAN THE .012 BRASS WIRE.**

**NOTE 3: THERE ARE TWO HOLES NEAR THE CAB WALL AND THESE ARE DIFFICULT TO DRILL VERTICALLY IF YOU DON'T USE A LONG DRILL BIT. USE LONG SHANK .012 BITS IF YOU CAN FIND THEM. I FOUND THAT .015 STEEL PIANO WIRE MAKES A GOOD DRILL FOR THESE HOLES AND WILL PROBABLY BE EASIER TO FIND THAN THE LONG DRILL BITS NEEDED TO DRILL THESE HOLES. CUT A SHORT PIECE OF .015 PIANO WIRE AND FILE A SHARP ANGLE ON ONE END FOR USE AS A DRILL BIT. THIS LENGTH OF WIRE SHOULD BE JUST LONG ENOUGH TO BE HELD IN THE PIN VICE AND STILL DRILL THRU THE FLOOR OF THE CAB. I'VE DONE THIS ON ALL OF MY WRIGHT TRAK MODELS AND IT'S WORKED WELL FOR ME.**

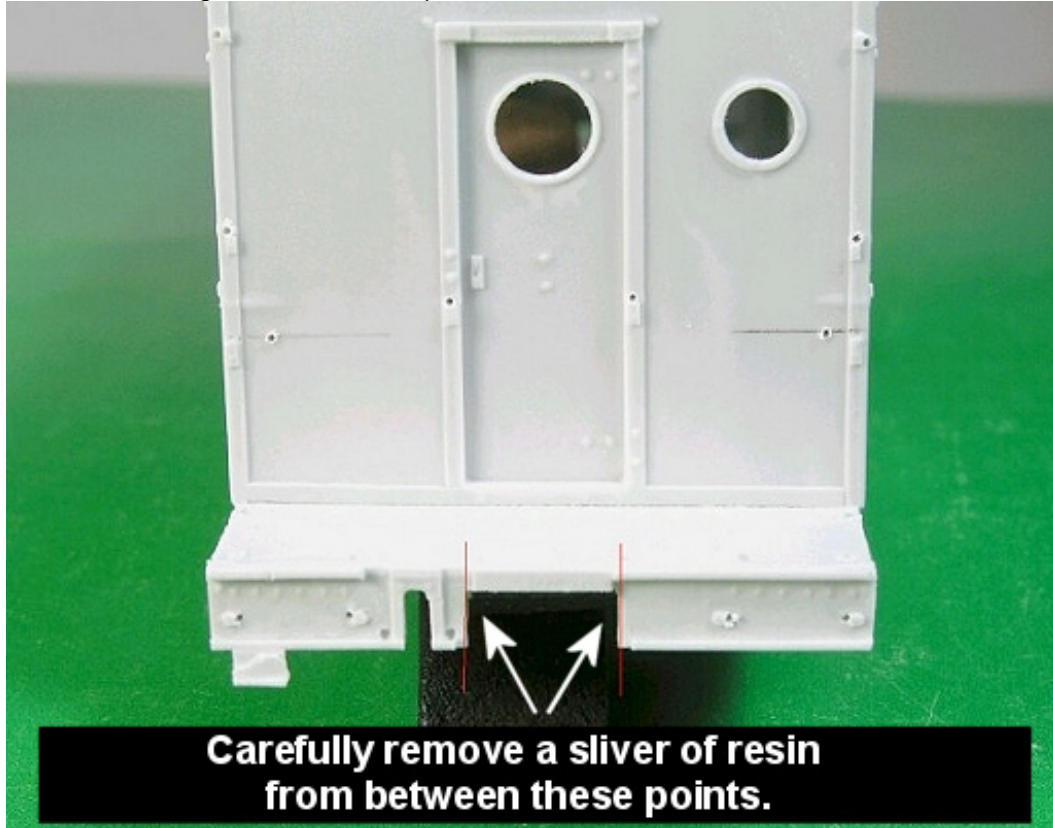
*Photos 2a and 2b. Holes to be drilled in cab body ends (for grabs) and on each corner (for marker lamps).*



### Step 3

The new Kadee # 78 coupler is perfect for this new Wright Trak caboose. It can be used with only a minor modification. I highly recommend it.

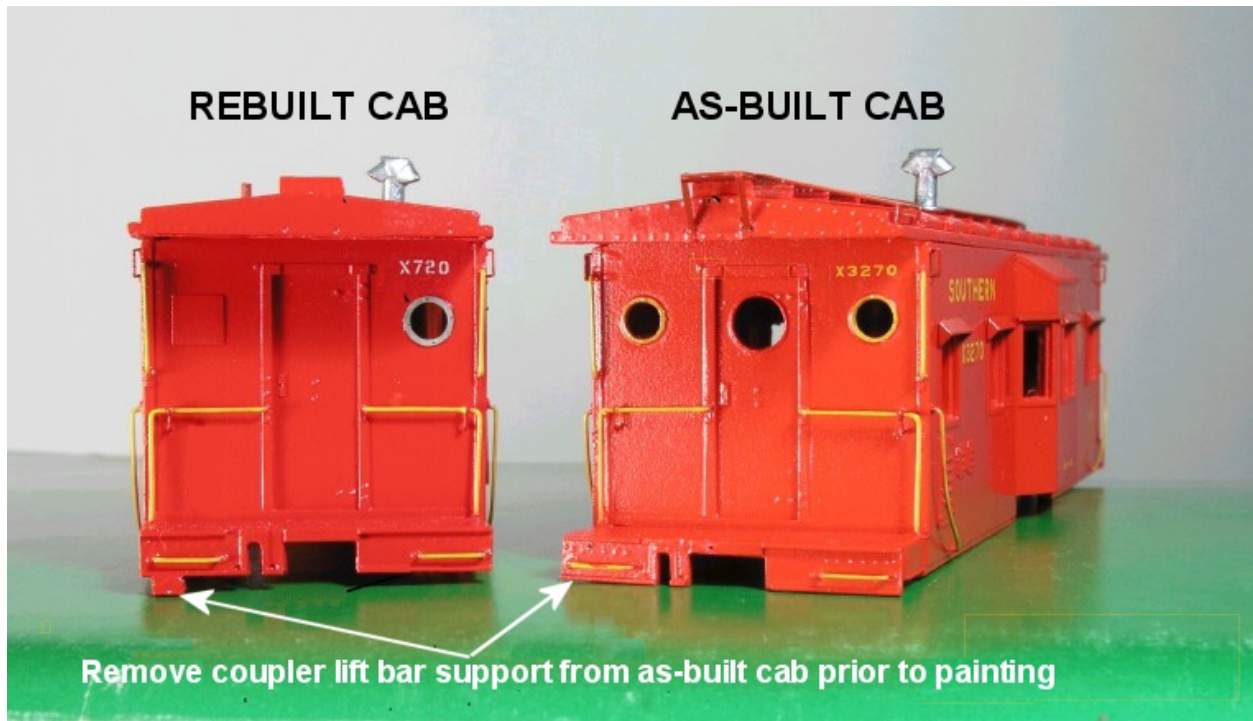
*Photo 3a. Installing the Kadee #78 coupler.*



To install the #78 Kadee coupler, carefully, *very carefully*, remove just enough, i.e., a sliver, of resin from both sides of the existing coupler pocket. Test fit as you go. *Do not* remove more material than needed. The #78 pocket should mount right to the end sills when properly fitted.

**As BUILT:** The "projection" on the lower left corner of the body seen in Photos 3a and 3b is the coupler lift bar support. During the construction of models for this project, I examined photos and noticed that some of the as-built cabs had a different setup for this lift bar than the rebuilt units (see Photo 3b). The as-built cabs had their coupler lift bars mounted just above the rear deck and are mounted in two round supports. Later, on the as-built cabs, we will add lift rings to support the coupler lift bars and we'll bend our own lift. For the as-built version, carefully remove this projection from both ends of the body prior to painting. For the rebuilt cab version, no modifications to the kit body are necessary.

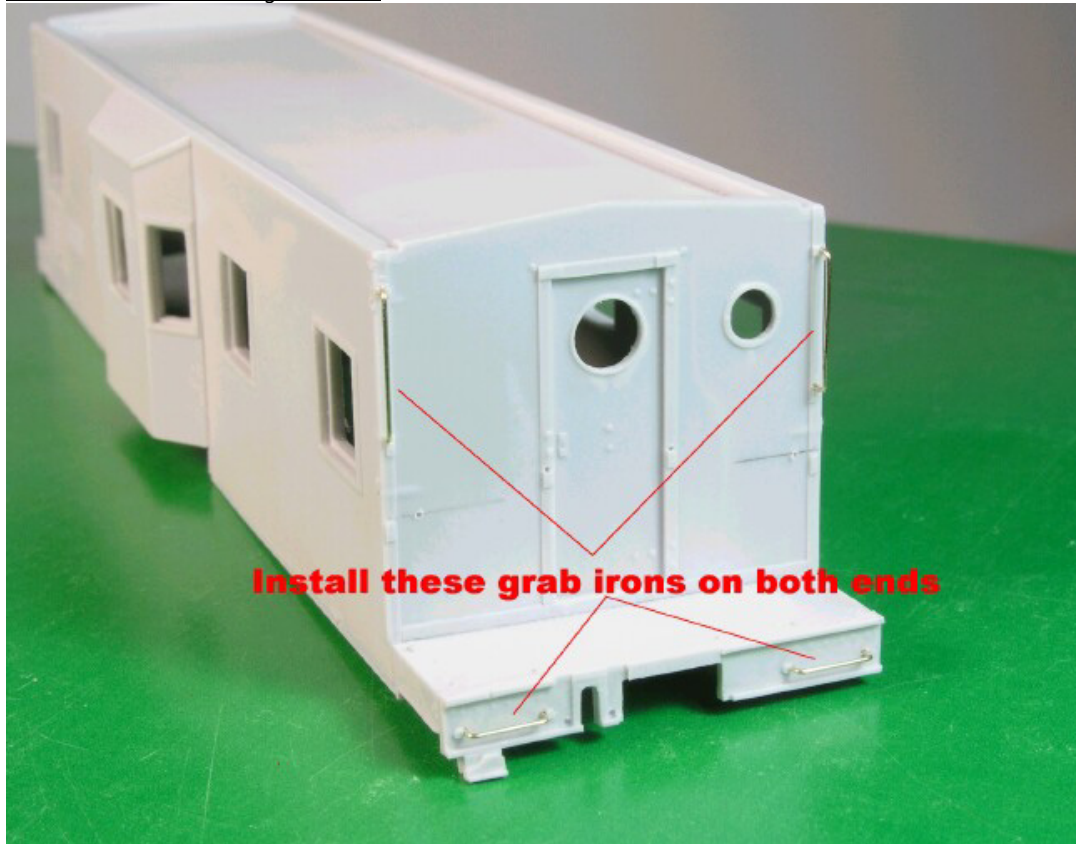
*Photo 3b. Compare the lower left corners of the rebuilt (left) and as-built cabs. Remove coupler lift bar support for as-built version prior to painting body.*



## Step 4

Bend and install the four grab irons seen in the scan. Cement in place and allow to dry.

*Photo 4. Install the end grab irons.*



On all of these cabs it is easier to install all of the wire grab irons first and then paint the model. Doing so prevents the paint from becoming scratched while test fitting each one of these custom-cut pieces of wire. The yellow paint will cover the red color on these grab irons without any problem.

## Step 5 as built

Drill the proper size hole for the smoke jack. Do not glue in place yet.

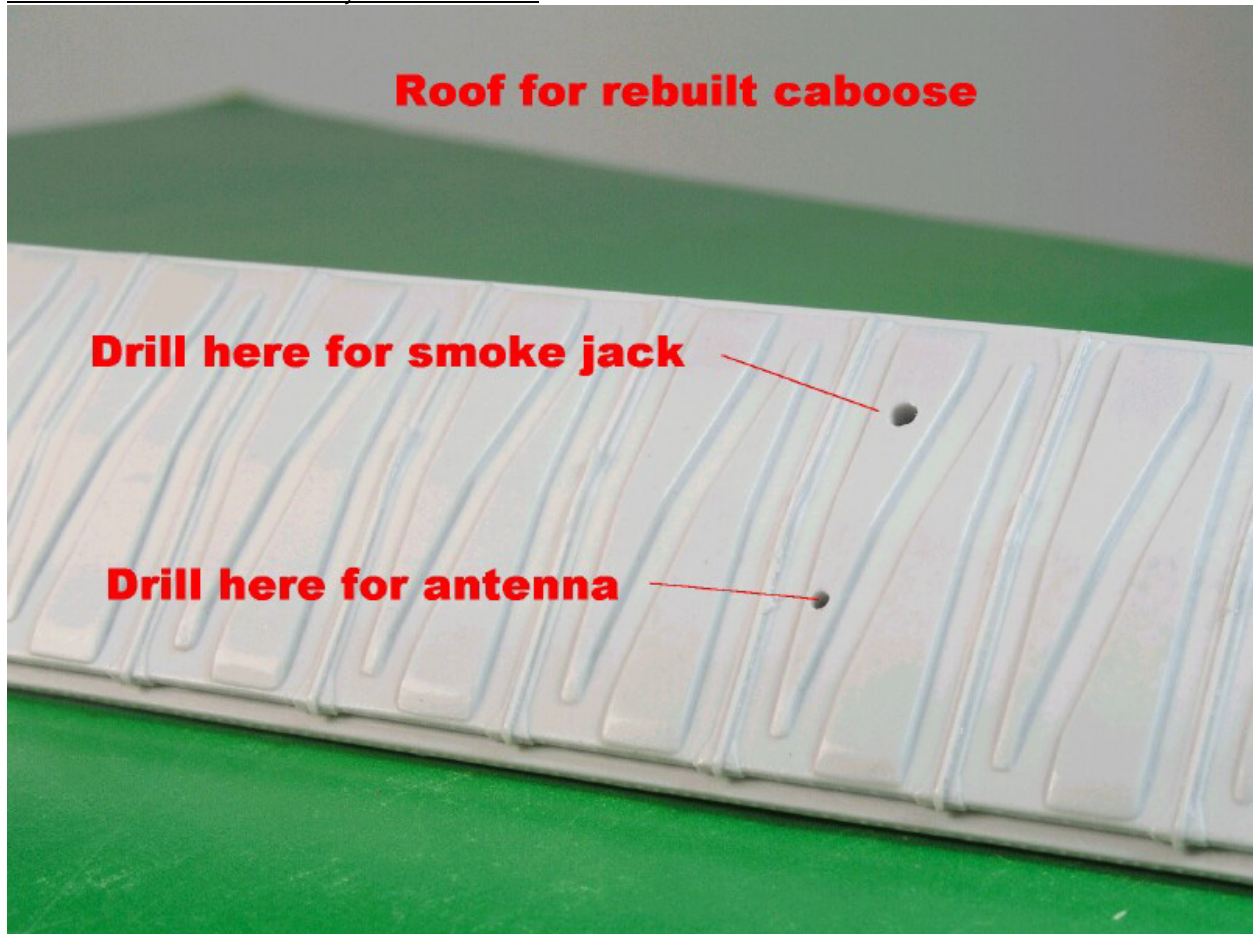
*Photo 5a. Drill hole for smoke jack.*



## Step 5 rebuild

Drill the proper size hole for the smoke jack. Also drill the proper size hole for the antenna (see Photo 5b. This hole should be on the same roof panel as the smoke jack and located approx. half way between the roof peak and the roof edge. Do not glue in place yet.

*Photo 5b. Drill holes for smoke jack and antenna.*

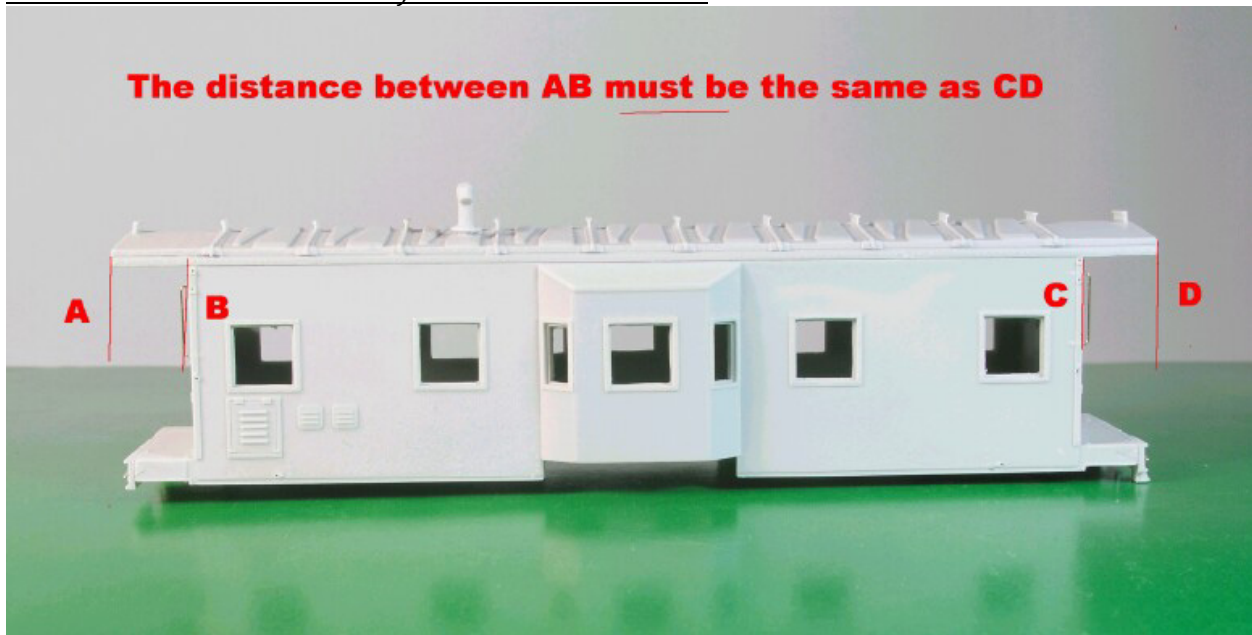


## Step 6A

Remove the flashing from the cab roof and smooth any defects you may see. Now is a good time to wash these parts before we join them together. Wash the roof, body and other resin detail parts in 70% alcohol. Spend some time doing this to remove the release agent used on these kits.

Next, wash the body and parts in warm water and a mild dishwashing liquid. Use a hair dryer to remove the excess water and dry quickly. Set the roof on the body and *very carefully* make sure that the distance A-B equals the distance C-D (see Photo 6a).

*Photo 6a. Attach the roof to the body after careful measurement.*

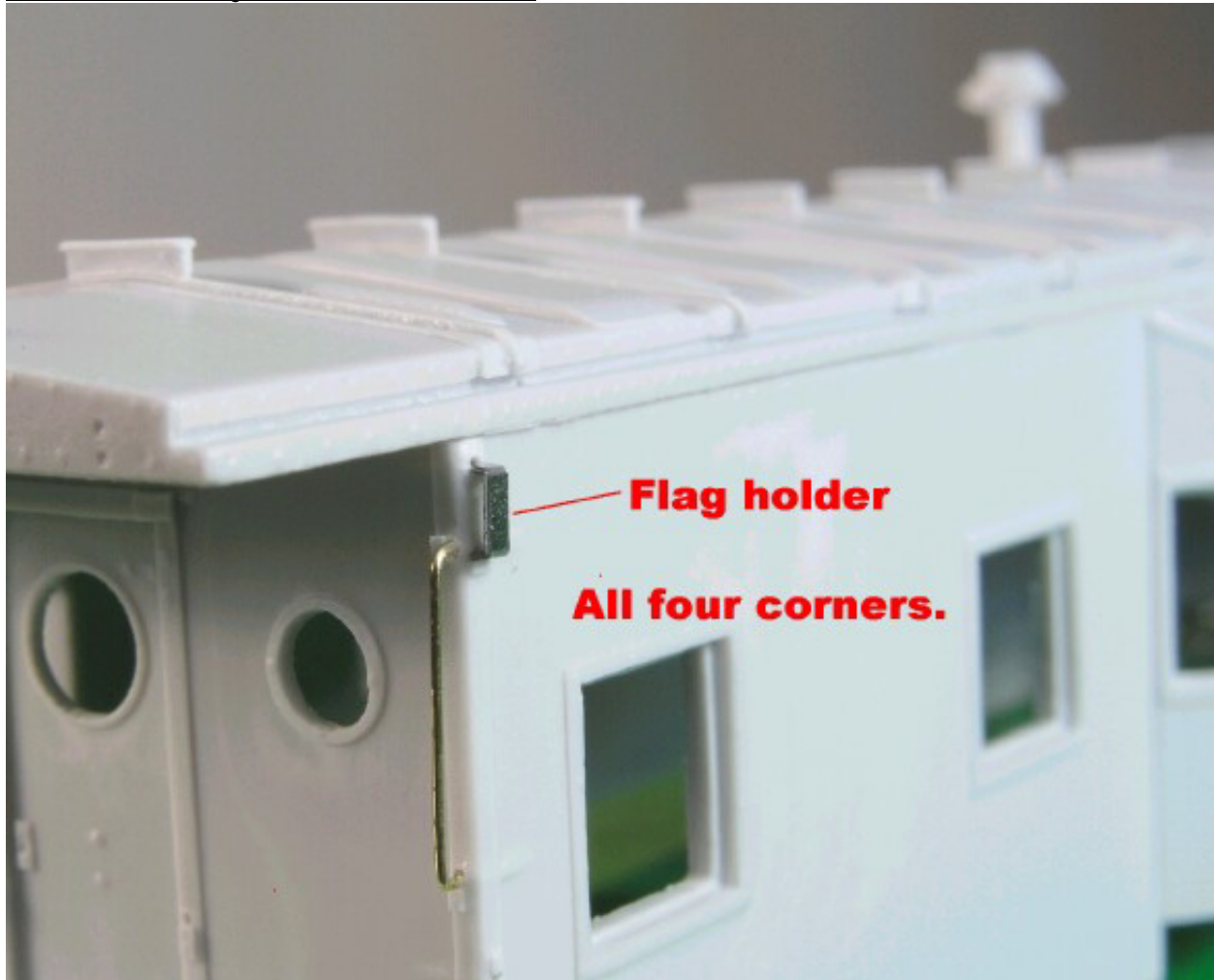


Correct distances here will insure that the end railings sit in a true vertical position when they are added to the model. The smoke jack should go on the end of the cab with two portholes. Cement the smoke jack to the hole in the roof and then cement the roof to the body. Allow to dry.

## Step 6B

Add the flag holders to the four corners with Cyanopoxy. The flag holders are the parts on the far left of the stainless steel parts sheet, directly above the window visors. There are ten of them. They look like very small hot dogs with a stick stuck thru the middle of them.

*Photo 6b. Add the flag holders to the four corners.*

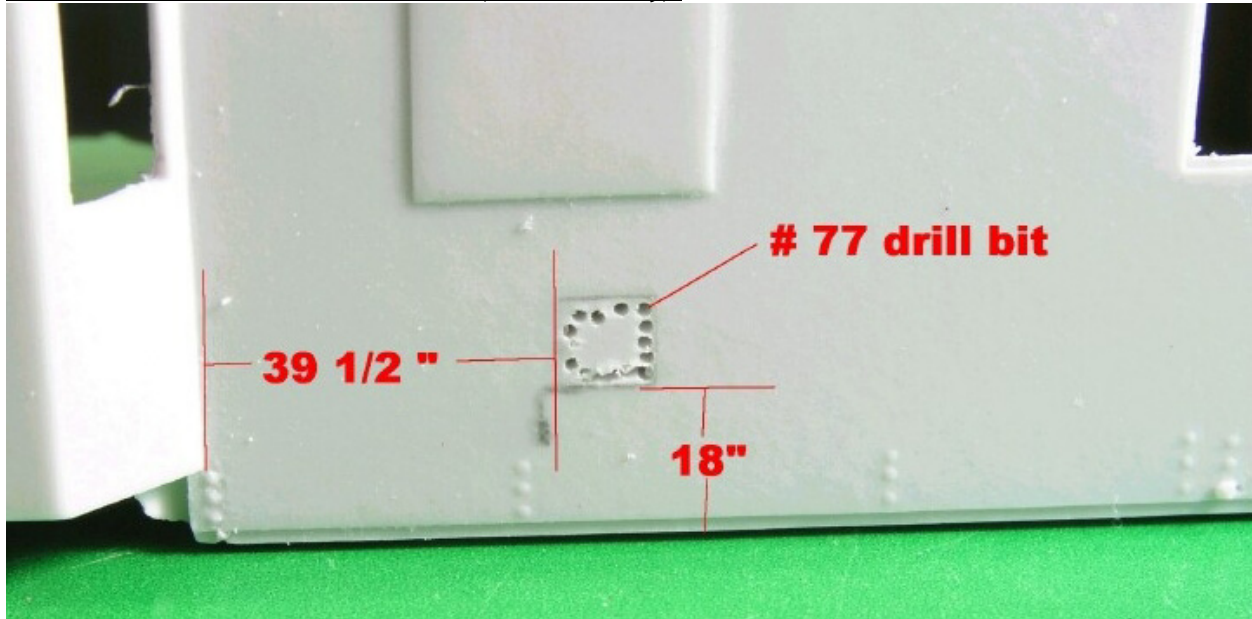


## Step 7 rebuilt cab only

The toilet water fill is located 39½ scale inches from the bay and is 18 scale inches above the bottom of the cab side. This part is installed on the same side as the generator grill.

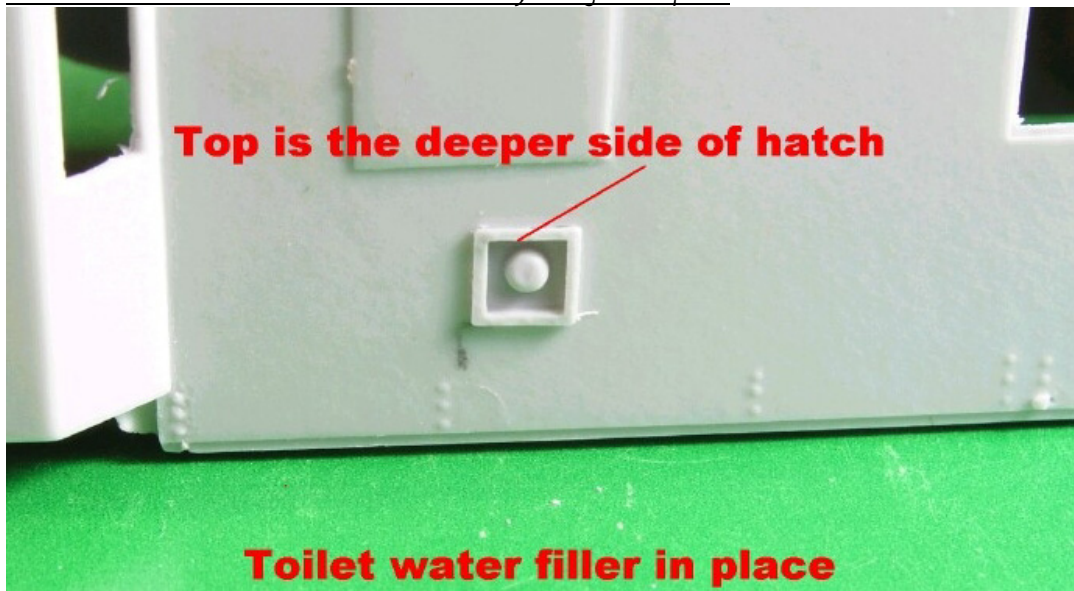
Measure the distances shown in photo and then draw a square box the size of the water fill cover. Now drill several # 77 holes within this square and connect them with a sharp # 11 blade. Square hole for a tight fit.

*Photo 7a. Drill and cut hole for water cover (rebuilt cabs only).*



Glue water fill cover in place and allow to dry. Be sure that the you have the proper top and bottom on this part. This part slopes in from bottom (shallow to top (deeper)). See Photo 7b.

*Photo 7b. Position toilet water fill cover correctly and glue. In place*



**NOTE: THE CORNER GRABS INCLUDED IN THE CABOOSE KIT ARE TOO SHORT TO LOOK CORRECT, SO WE WILL MAKE A SET OF OUR OWN IN THE FOLLOWING STEPS.**

## Step 8

END CORNER GRABS. Cut four sections of the .012 brass wire and bend accordingly to form the two corner grabs found on each end. Thread this wire thru the S/S brace and cement in place.

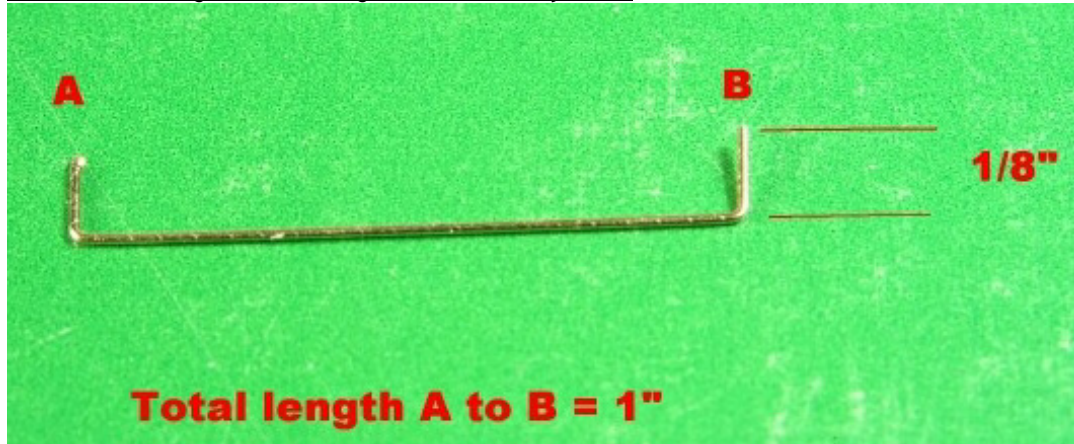
*Photo 8. Install end corner grabs.*



## Step 9

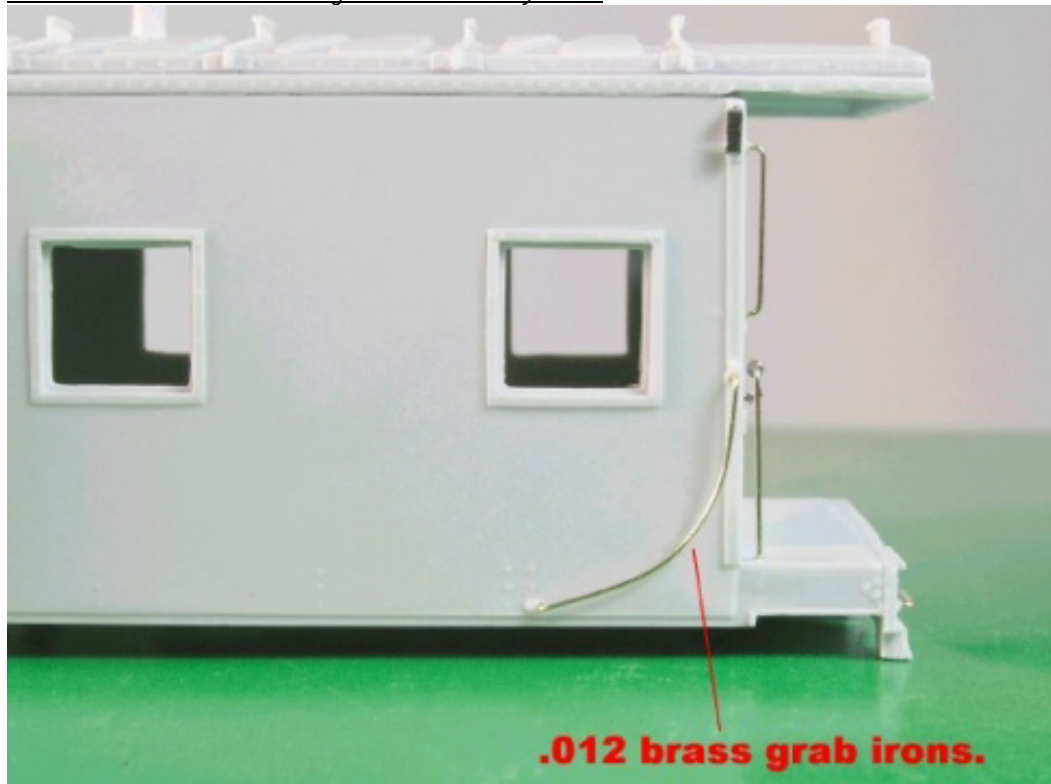
SIDE CORNER GRABS. Cut four sections of .012 brass wire 1" long. Now, make bends at the ends of this wire of 90 degrees, 1/8" long. Carefully bend this formed wire around the tip of your finger to form a semi-circular grab iron.

*Photo 9a. Creating semi-circular grab irons for body sides.*



Carefully install the four semi-circular grabs into the appropriate holes being careful not to kink any portion of this wire (see photo 9b). Glue in place and allow to dry completely.

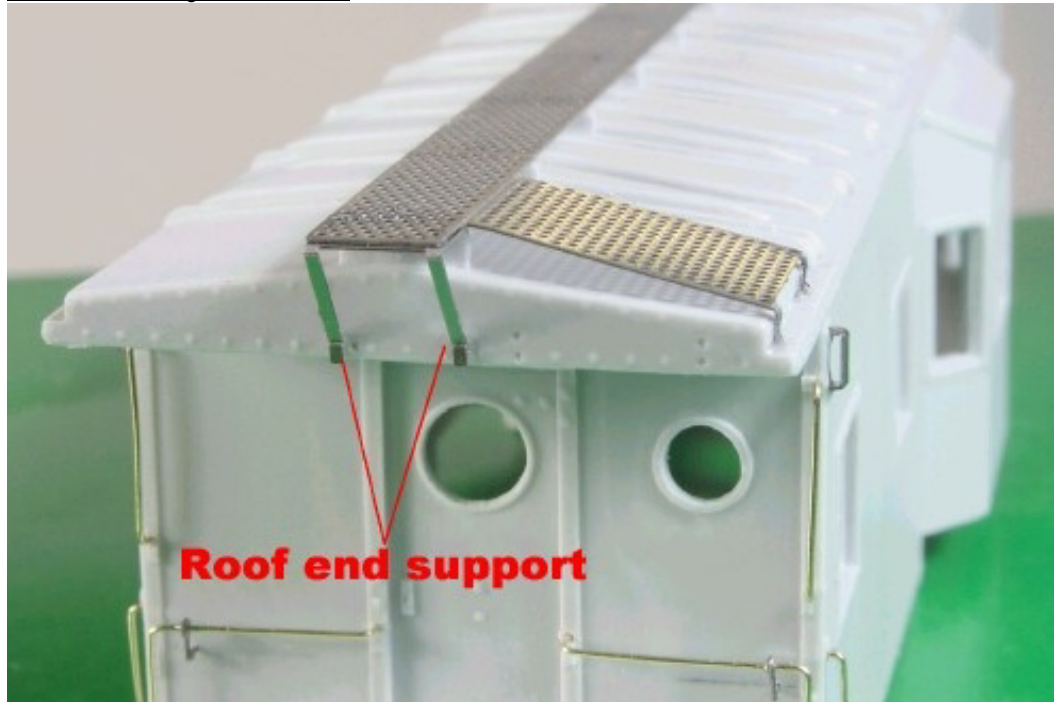
*Photo 9a. Install semi-circular grab irons on body sides.*



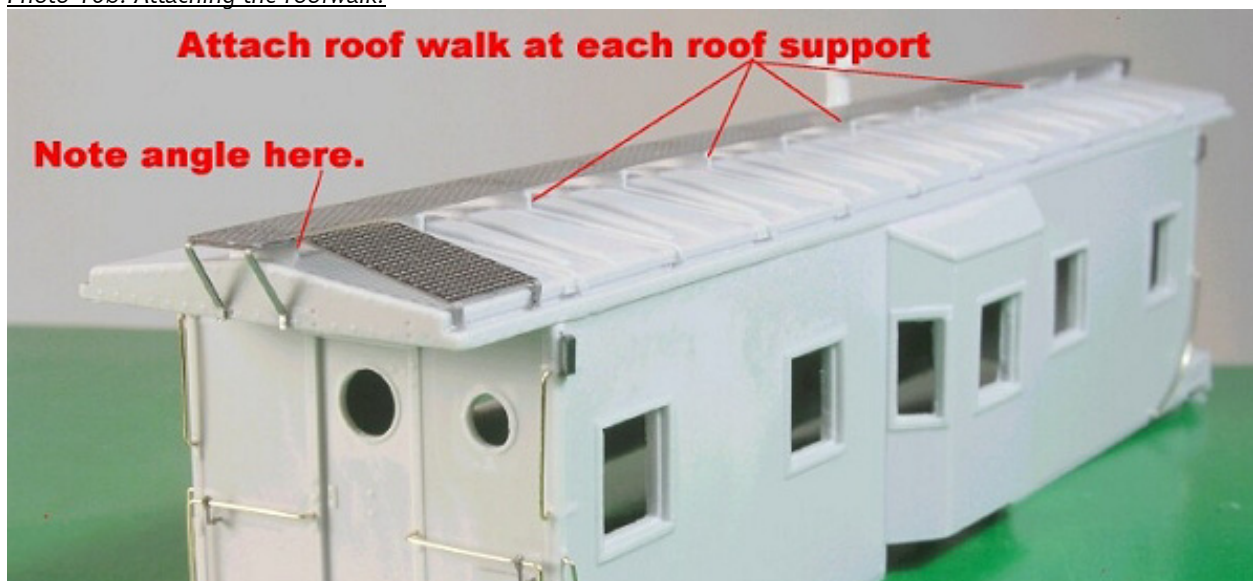
## Step 10

Remove the roof walk from the stainless steel fret and remove any rough edges. Carefully bend the angles on the roof platforms and test for the proper fit. Also bend down the two supports on each platform and check for proper fit.

*Photo 10a. Fitting the roofwalk.*



*Photo 10b. Attaching the roofwalk.*



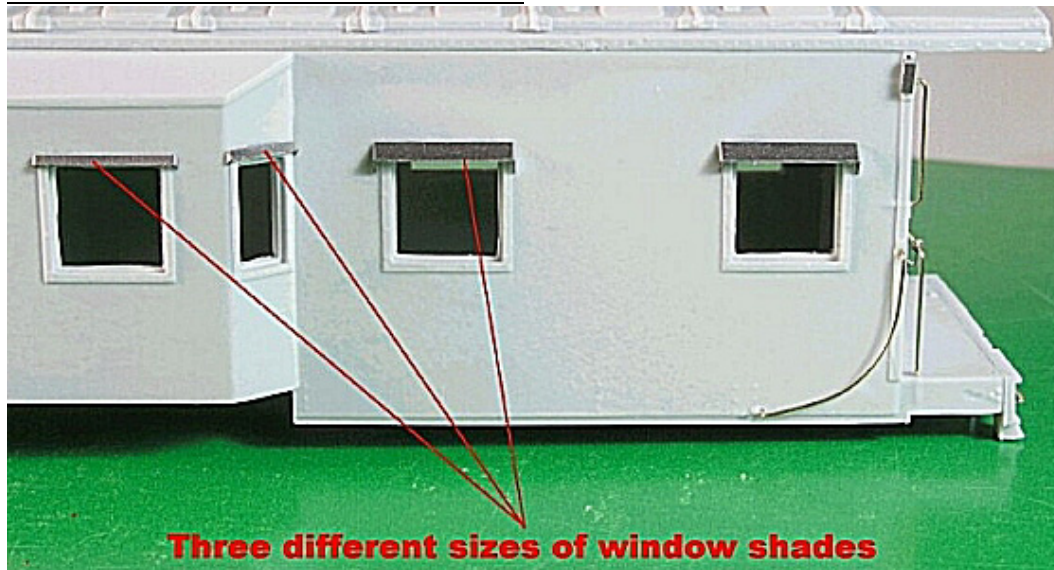
After obtaining the proper fit for the supports and platforms, glue the walkway in place. Allow to dry completely.

## Step 11

Carefully remove the window shades from the stainless steel fret and remove any rough edges. Very carefully make a perfect 90 degree bend on both ends of each window shade.

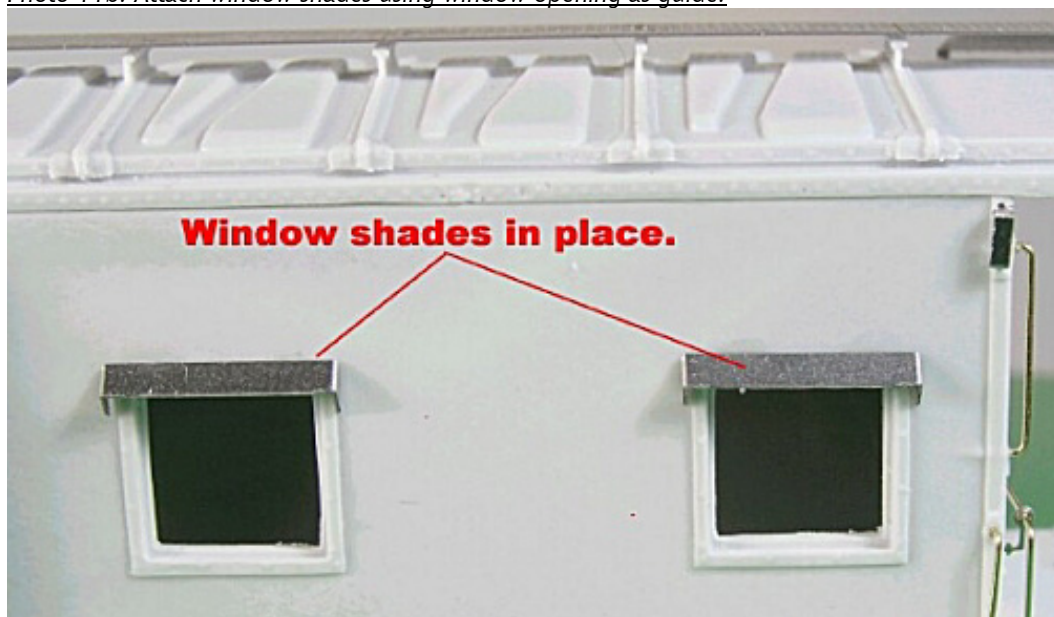
**NOTE 4: THAT THERE ARE THREE DIFFERENT SIZES FOR THE SHADES, SO PAY CLOSE ATTENTION AS TO WHERE EACH SIZE GOES (SEE PHOTO 11A).**

*Photo 11a. Window shades come in three sizes..*



Carefully glue the different shades to their proper locations. I suggest using the tops of each window as a guide to getting the shades straight. First, use only one or two very small drops of adhesive to attach each shade. Then go back and add more adhesive to the underneath of each shade to make sure it is securely attached.

*Photo 11b. Attach window shades using window opening as guide.*



## Step 12

**NOTE 5: I HAVE DISCUSSED THE COLORS OF SOUTHERN CABS WITH A COUPLE OF CLOSE FRIENDS AND MODELERS AND HAVE COME TO BELIEVE THAT THERE WAS A COLOR DIFFERENCE BETWEEN THE EARLY, AS BUILT CABS AND THE LATER, REBUILT CABS. THE AS BUILT CABS SEEMED TO BE A REDDISH ORANGE COLOR WHILE THE REBUILT CABS SEEMED TO BE A DARKER, DEEPER RED COLOR.**

**THE WRIGHT TRAK MODEL, BEING PRODUCED OF RESIN, WILL HAVE TO BE PAINTED/PRIMED WITH MODELFLEX OR ONE OF THE OTHER WATER-BASED PAINTS FOR THE PAINT TO REMAIN ON THE MODEL WHILE IT IS BEING HANDLED. I HAVE USED SCALECOAT II ON ONE OF THESE MODELS AND FOUND THAT IT WILL NOT ADHERE TO THE RESIN AS WELL AS I WOULD HAVE LIKED.**

Photo 12a is a scan of the early version, as built cab. This model was shot with Modelflex CB&Q Chinese Red. You will notice the "orangish/red" tint in this scan and I think it would be a good choice of colors for this version of the cab.

*Photo 12a. As built cab painted with Modelflex CB&Q Chinese Red.*



Photo 12b shows the later, rebuilt version of the Wright Trak cab kit. This model was painted with Modelflex CB&Q Chinese Red and then repainted with Scalecoat II Bright Caboose Red. I chose this color for my model as it is my favorite red color and my other cabs were painted using this color.

Photo 12b. Rebuilt cab primed with Modelflex CB&Q Chinese Red and painted with Scalecoat II Bright Caboose Red.



Our hands and fingers secrete a good amount of oils during the day and naturally we're going to leave an oily spot or two while we build our models. I've found that if I spend a couple of hours working on my models, I need to go in and wash my hands so as to prevent oils from building up on the surface of my models. It is *always* a good idea to wash and dry your models before painting them.

The Wright Trak model, being produced of resin, will have to be painted/primed with Modelflex or one of the other water based paints for the paint to remain on the model while it is being handled. I have used Scalecoat II on one of these models and found that it will not adhere to the resin as well as I would have liked it to.

**NOTE 6: I HAVE PAINTED SEVERAL OF THESE RESIN KITS WITH MODELFLEX AND THEN REPAINTED THEM WITH SCALECOAT II AND HAVE SEEN NO HARMFUL SIDE EFFECTS ( TO THE CABS FROM DOING SO. I WOULD SUGGEST USING THIS PROCEDURE IF YOU CHOOSE TO USE ANY OF THE SCALECOAT OR FLOQUIL COLORS TO PAINT YOUR MODELS.**

## Step 13

*Photo 13a. Decals applied to the as built version.*



*Photo 13b. Decals applied to the rebuilt version.*

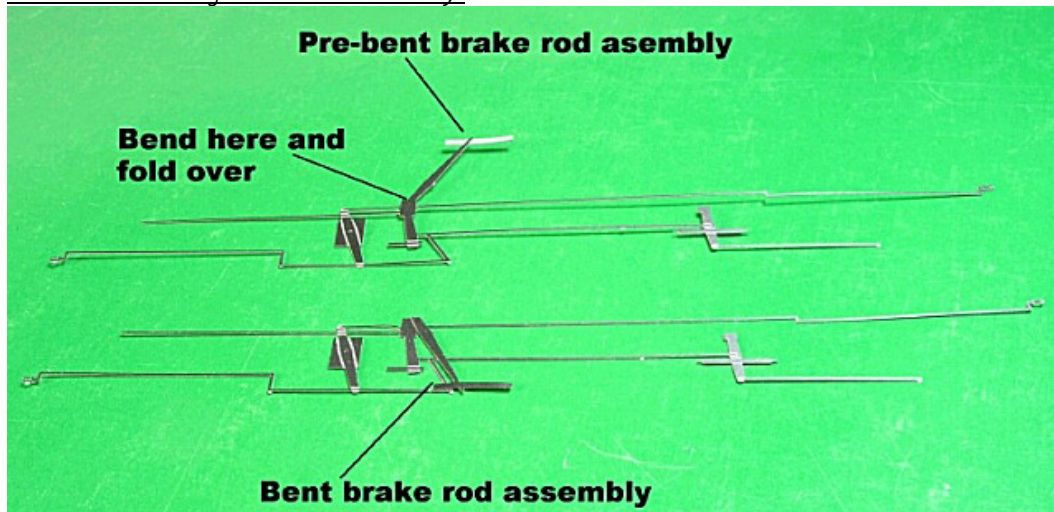


## Step 14

In photo 14, you will notice two sets of brake rod assemblies. The top one show the assembly as found in the kit prior to being bent, the bottom assembly shows how it should appear after the bend. Using a good, sturdy set of long nose pliers carefully bend the slack adjuster over the assembly until it sits flat in the position shown at the bottom (see Photo 14a).

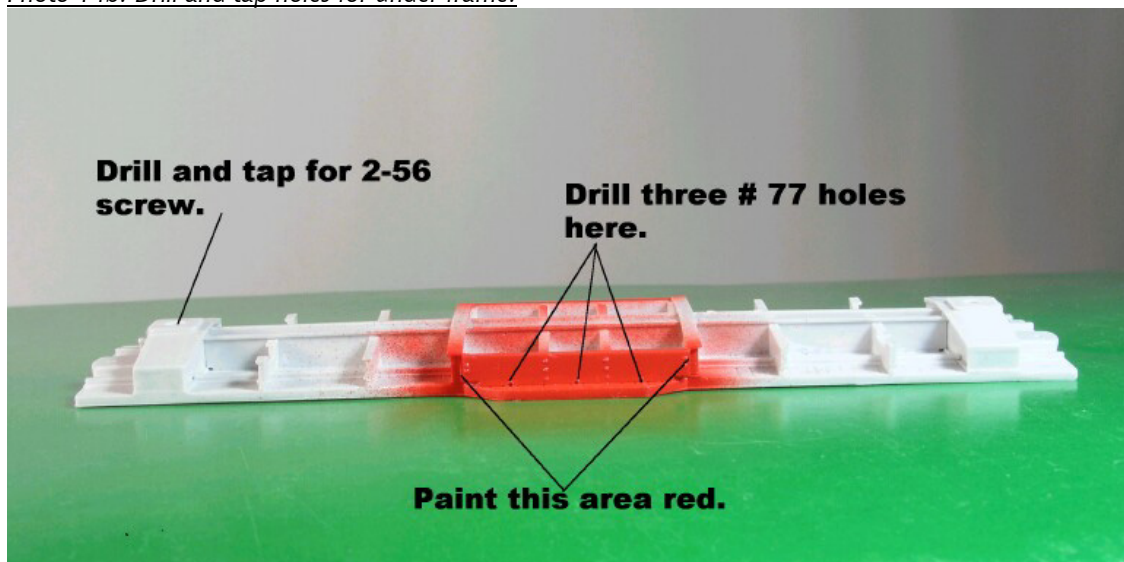
**NOTE 7: THE SLACK ADJUSTER LACKS A SCRIBED BEND LINE SO WORK SLOWLY TO AVOID BREAKING THIS PART OR BENDING IT INCORRECTLY.**

*Photo 14a. Bending a brake rod assembly.*



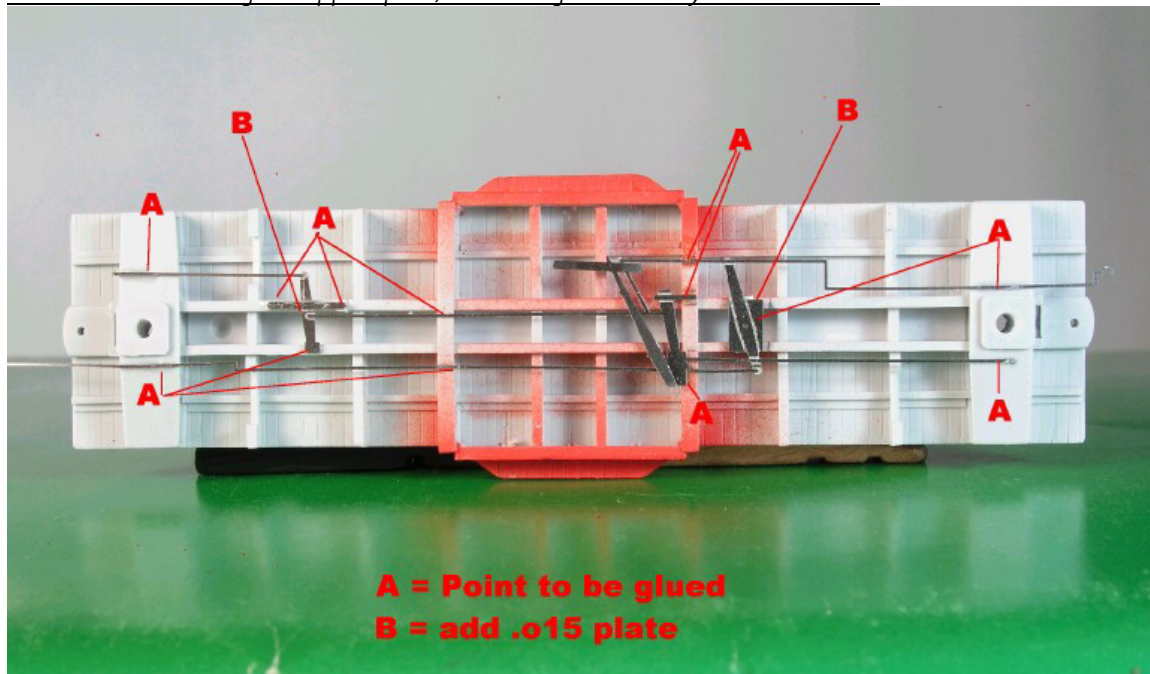
Drill and tap the bolsters for 2-56 screws. Work slowly and carefully so as to drill these hole straight and in the middle of the bolster holes. Drill the other six holes shown with a # 77 drill bit (see Photo 14b).

*Photo 14b. Drill and tap holes for under frame.*



Lay the brake rod assembly on the under frame and mark the two areas that need the .015" thick pads (see Photo 14c). The reason for these pads is so the entire brake assembly will sit parallel with the under frame. If these pads are not used, these two locations will sit lower than the rods and will look strange. Cut one plate the size of the rectangle on the clevis and glue it in place under there. Now, cut a thin piece of the .015 and glue it under the other location. Next, glue the assembly to the under frame and allow to dry.

*Photo 14c. Place and glue support pads, and then glue assembly to under frame.*



Mask the area shown in red and paint the remainder of the under frame in a flat black color (see Photo 14d).

*Photo 14d. Mask and paint the under frame flat black.*



I did not spend a lot of time and effort on detailing the under frame as you can tell. These parts are very seldom seen and I really do not have a lot of information on placement of these parts. I do know that the detail parts you see in the scan are painted red so I painted these parts with Modelflex CB&Q Chinese Red and installed them using .015" brass wire to peg them to the floor (see Photo 14e). If any of you on the list have drawings of the under frame detail parts and locations for these parts, please let us know.

*Photo 14e. Minimal details necessary are painted Modelflex CB&Q Chinese Red and attached to the under frame.*



## Step 15

**NOTE 8. WE ARE TO THE POINT IN THIS PROJECT WHERE WE WILL BE WORKING ON DETAIL PARTS THAT WILL DEFINITELY HAVE AN IMPACT ON THE LOOKS OF YOUR SOUTHERN CABOOSE. ALTHOUGH NOT OVERLY COMPLICATED OR TRICKY, THESE STEPS WILL REQUIRE SOME PRECISE MEASURING, BENDING AND PAINTING. PLEASE DO NOT RUSH THESE STEPS! THIS PROJECT IS NEARING COMPLETION. WHEN THE RESULTS OF THESE STEPS ARE CONNECTED TO THE WORK IN THE PREVIOUS STEPS, YOU WILL BE GLAD THAT YOU TOOK YOUR TIME AND COMPLETED EACH STEP AS WELL AS YOU COULD AND PROUD OF THE FINISHED MODEL.**

In Photo 15a you will see a bending diagram for the brake wheel support. Cut each support from the stainless steel etching. Remove any flashing left from these cuts. Lay the supports on a flat surface with the SMOOTH SIDE UP. Very carefully, using the measurements found on the scan, measure for each bend. I suggest using a semi dull X-ACTO™ #11 blade to scratch the measurements onto the stainless steel parts. Be sure to mark BOTH legs of the supports, as you will need to bend both sides at the same places and at the same time. Measure the first two bends from the top down and then measure the two bottom bends from the bottom up. This will leave you with the 44 scale inches shown in the drawing. Do not include the mounting pins in your measurements; instead

measure from the bottom of the support legs. Hold your pliers across both bends at the same time and maintain pressure until the bend has been made. If your support moves, it will more than likely be crooked. If you cannot see both marks when the pliers are applied then STOP. Remark for the bend and try again.

*Photos 15a and 15b. Brakewheel support dimensions and photograph.*

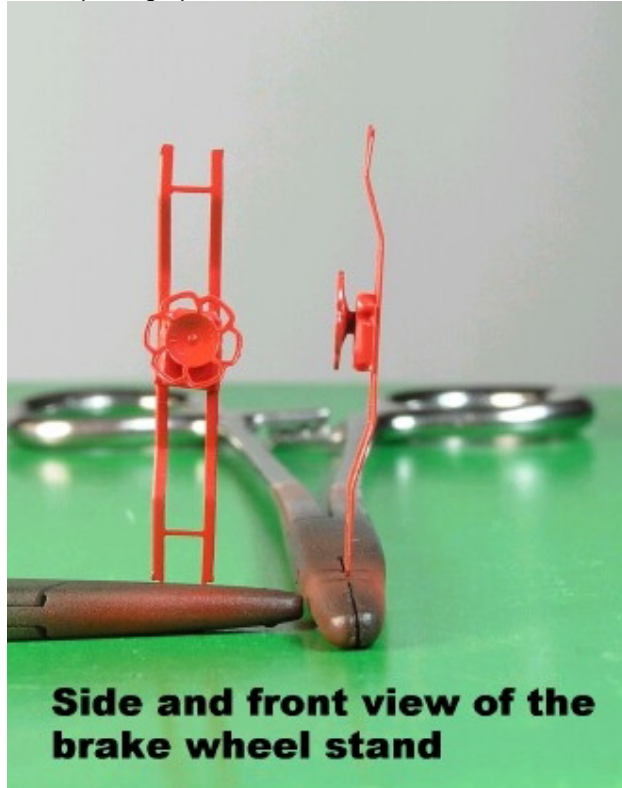
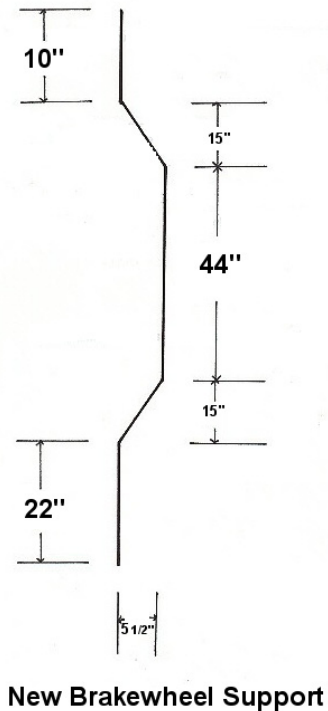


Photo 15b shows the brake wheel support and the brake wheel housing after painting. The brake wheel housing should be centered on the flat area of the support and the bottom even with the bottom opening of the support.

**NOTE 9 : PLEASE DO NOT ATTEMPT THE FOLLOWING STEPS IF YOU ARE UNCLEAR ABOUT THESE INSTRUCTIONS AND DO NOT GLUE ANY PARTS IN PLACE AS THEY ARE VERY DIFFICULT TO REMOVE AND REPOSITION WITHOUT DAMAGING THE BRAKE WHEEL SUPPORT. I AM MORE THAN WILLING TO ANSWER ANY QUESTION YOU MAY HAVE CONCERNING THESE STEPS.**

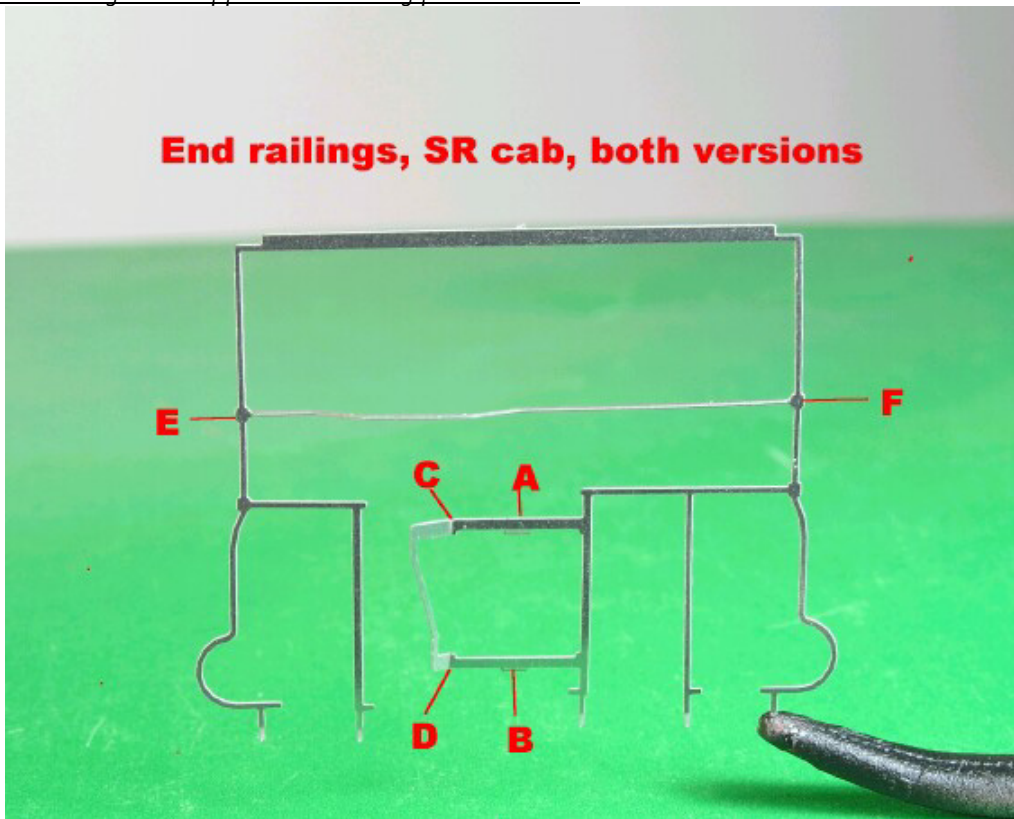
This step is not difficult, but as was stated in the previous steps, you will need to work slowly when bending the stainless steel parts and pay close attention to where the bends are made. **PLEASE DO NOT ATTEMPT THIS STEP WITHOUT THE AID OF TWO QUALITY PAIRS OF PLIERS AS THE STAINLESS STEEL, EVEN AS SMALL AS THE PART MAY SEEM, IS VERY STRONG AND SOME SMALLER PARTS WILL DISTORT IF NOT HELD TIGHTLY AND BENT SLOWLY.**

## Step 16

You will notice three sets of letters in Photo 16a—A-B, C-D and E-F. Holding the frame above A, bend the small square inward until it is 90 degrees to the frame. Do the same for letter B. These squares will support the round drum and handle when completed. Now, slowly bend positions C and D outward to the angle shown.

Do not over bend, but do make an angle here. We may have to adjust this bend when the brake support is added as the two pieces are supposed to mate where they meet. (Let's hope they do!!)

*Photo 16. End railings with support and bending points labeled.*



Next, holding the end railing at position E, **VERY CAREFULLY** bend the cross support with your other pair of pliers. Bend only a few degrees out at a time and then move to position F and bend a few degrees out.

Return to position E and bend a few more degrees and so on and so on. **DO NOT** attempt to make the 90-degree bend at one time as you will distort the entire frame. **TRUST ME!** After you have made these bends in the end railings, paint them and allow to dry.

## Step 17

Remove the four splashguards, four reflector discs, eight window frames, two reflector disc handles, and two rerail frog hooks from the stainless steel fret. Carefully remove any spurs or jagged edges on these parts, especially the window frames, as these will be a tight fit when they are applied.

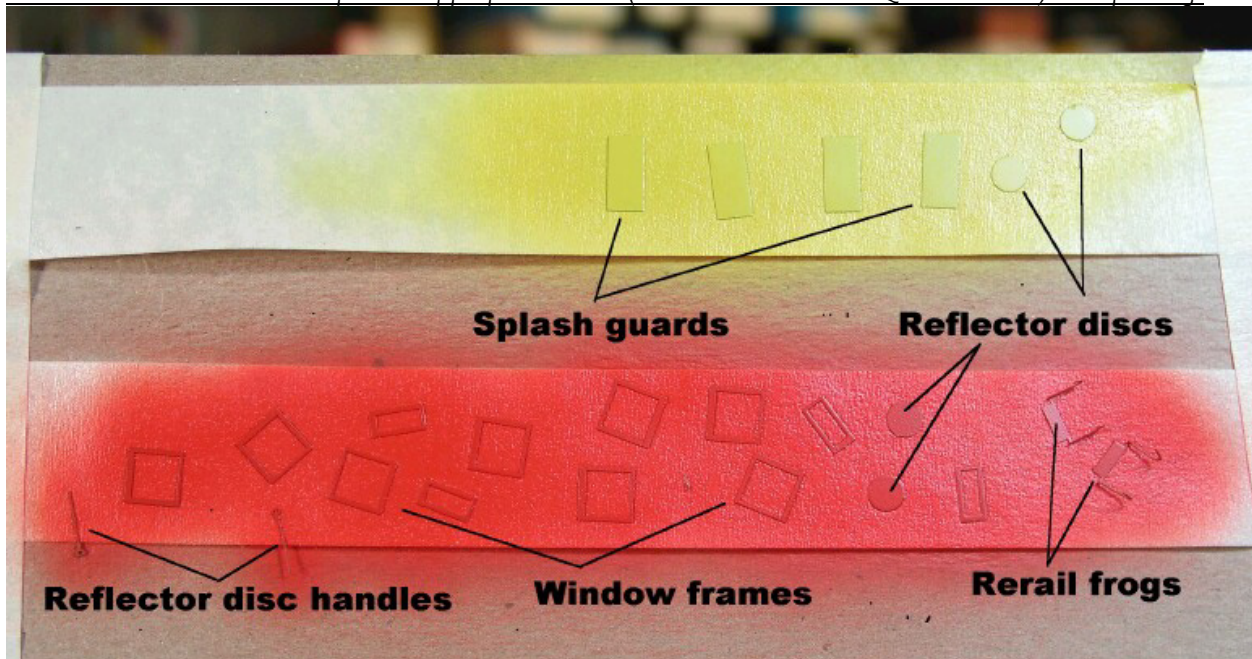
Paint the window frames, two discs and rerail frog hooks the same red you used to paint the caboose body. Paint the splashguards and two discs Reefer Yellow and allow to dry. The splashguards will need to be painted on both sides, but the window frames and rerail frog hooks only need to be painted on one side.

Now would be a good time to paint the end railings Reefer Yellow if you haven't already done so. Allow to dry.

The best way to prep the stainless steel parts for painting is to lay them on a sheet of 400 grit wet/dry sandpaper and sand in a circular motion to give some "tooth" to the smooth metal surface.

Wipe clean with 70% isopropyl alcohol. Since you're painting with a light color—Reefer Yellow, spray a light coat of primer or a light gray color first on each surface to be painted. Darker colors don't require a primer as they will cover well themselves. Fragile parts, such as the end railings, should be left on the stainless steel fret and sanded while still attached. This will prevent unwanted bending of these parts. Other, larger, flat parts may be removed from the fret to do the sanding.

*Photo 17. Stainless steel detail parts in appropriate colors (Reefer Yellow and CB&Q Chinese Red) after priming.*

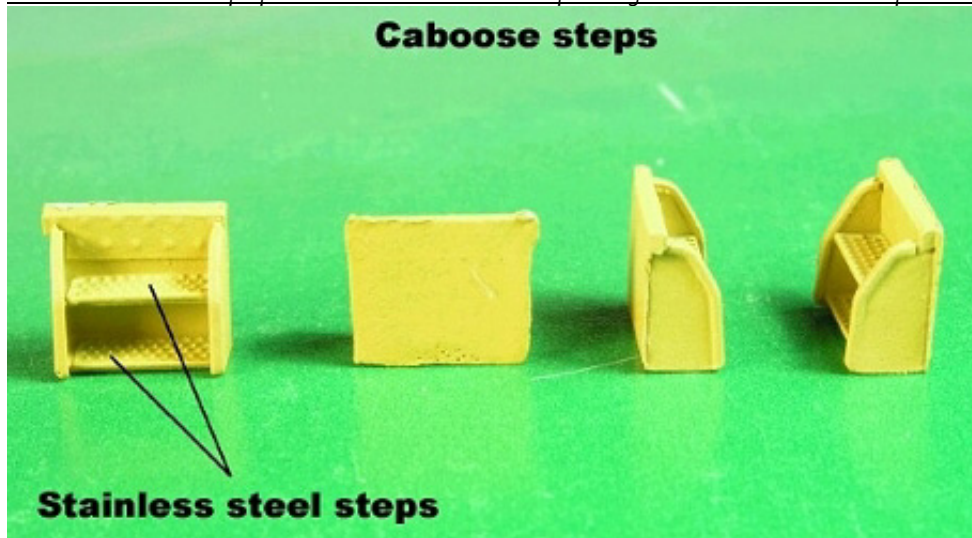


## Step 18

REBUILT CAB: Assemble the four corner steps by gluing the two stainless steel steps into each step housing. Paint Reefer Yellow and allow to dry.

AS BUILT CAB: Paint Reefer Yellow and allow to dry. No stainless steel steps are needed in the as-built version. The as delivered cabooses only had a diamond tread pattern on them like the end platforms. The kit does not include the diamond pattern on the masters because the stainless steel step insert, which follows the prototype pattern for the re-built cabooses, would not fit flat on the step with cast-in tread.

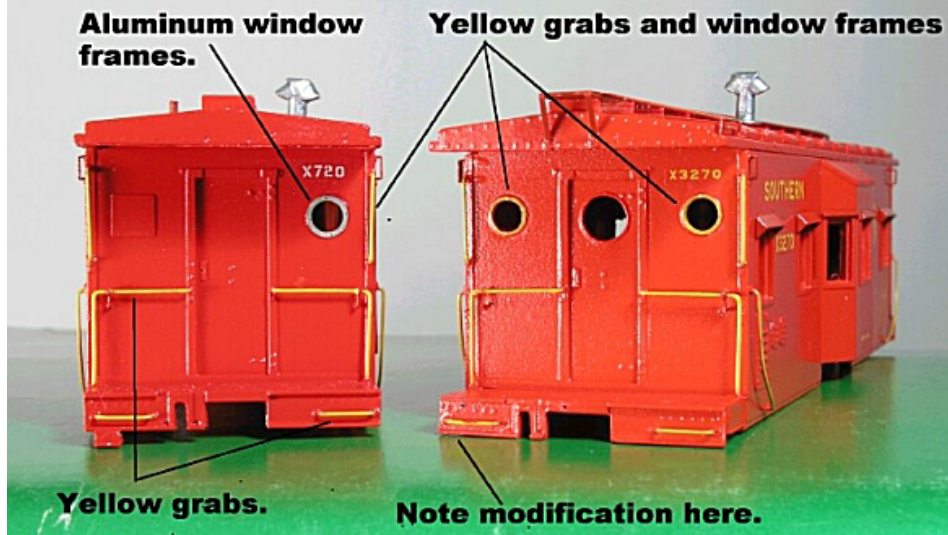
*Photo 18. Corner steps painted Reefer Yellow after priming. NOTE stainless steel step inserts for rebuilt cab only.*



## Step 19

Paint all of the grab irons and railings with Reefer Yellow. Please note that the round window portholes on the as-built cabs are also painted yellow. Install the stainless steel window frames on the rebuilt version of this cab. NOT SHOWN: glue the marker light to the roof of the rebuilt cab (see Photo 19).

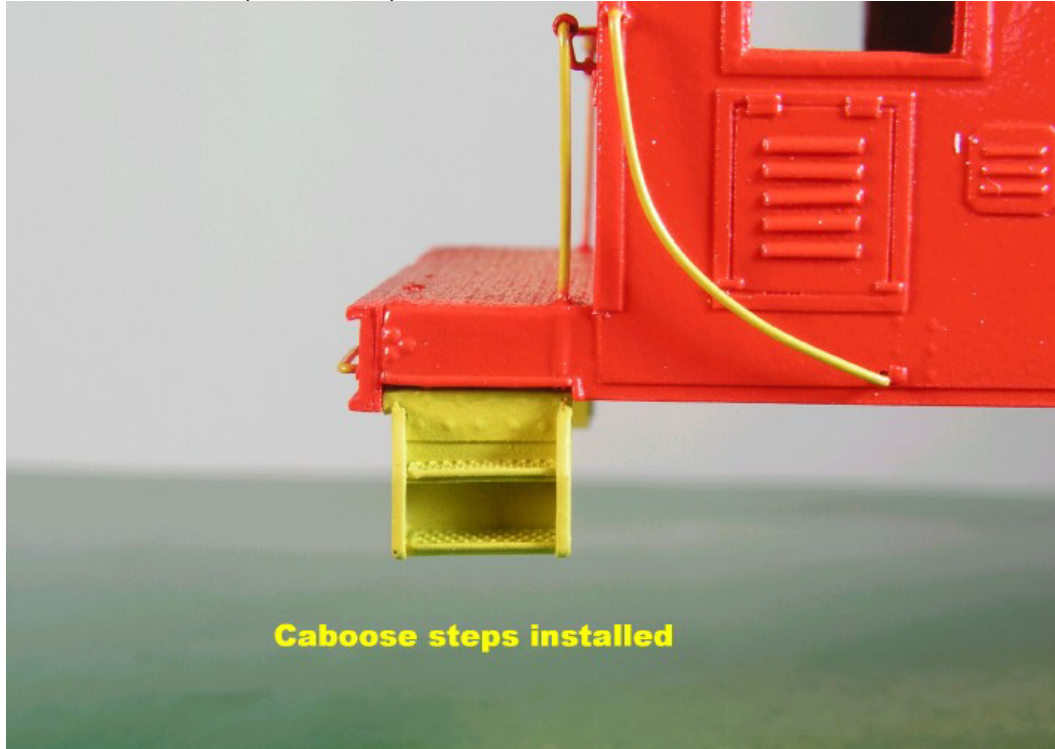
*Photo 19. Porthole window frames and grabs painted appropriately for rebuilt (left) and as-built (right).*



## Step 20

Install and glue the completed corner steps and allow to dry. Note the position of the corner step and make sure it is set inward and flush with the inside of the shell housing.

*Photo 20. Caboose step installation position.*



## Step 21 As-built cab

I deviated a bit from the kit instructions in this step and I think what I did made a tremendous difference in the appearance of this cab. The kit instructions say to add the window frames BEFORE you paint the model and glue the windows from the inside of the shell afterwards, but in this case I painted the model and window frames separately. When I first received my model, I noticed how deep the window cut outs appeared and was wondering if the glass and frame would fit on the *outside* instead of adding the windows from the inside. Adding the glass and frame from the outside prevents a gap the width of the shell; and, in my opinion, it looks great! There is no gap. If you're careful with the glue, you can have some very nice looking windows on your model.

Carefully measure and cut ten (10) square windows and four (4) rectangular windows from clear .010" plastic. Using Microscale's Micro Kristal Klear diluted with water (or your favorite product for installing clear window material), apply it carefully and sparingly to the window to be installed. Now, install the clear window and press the edges with a tooth pick, the handle of a small paint brush, or similar tool. Move to the next window allowing the first one to dry. Install all windows now including those on both cab ends.

If you have never used Kristal Klear:

Pour a small mound of the Kristal Klear on a piece of plastic sheet. Now, using a very small, i.e., 10/0, brush, dip it in a bowl of water and then stick it in the Kristal Clear. If you have enough water on your brush, the Kristal Klear will appear thin and milky. Now very carefully apply the mixture to the cab window ledges. The mixture should go on smooth if you have enough water in your brush. You won't need to coat the entire ledge, but try to get at least a ¼ inch of the mix on each side of the window ledge.

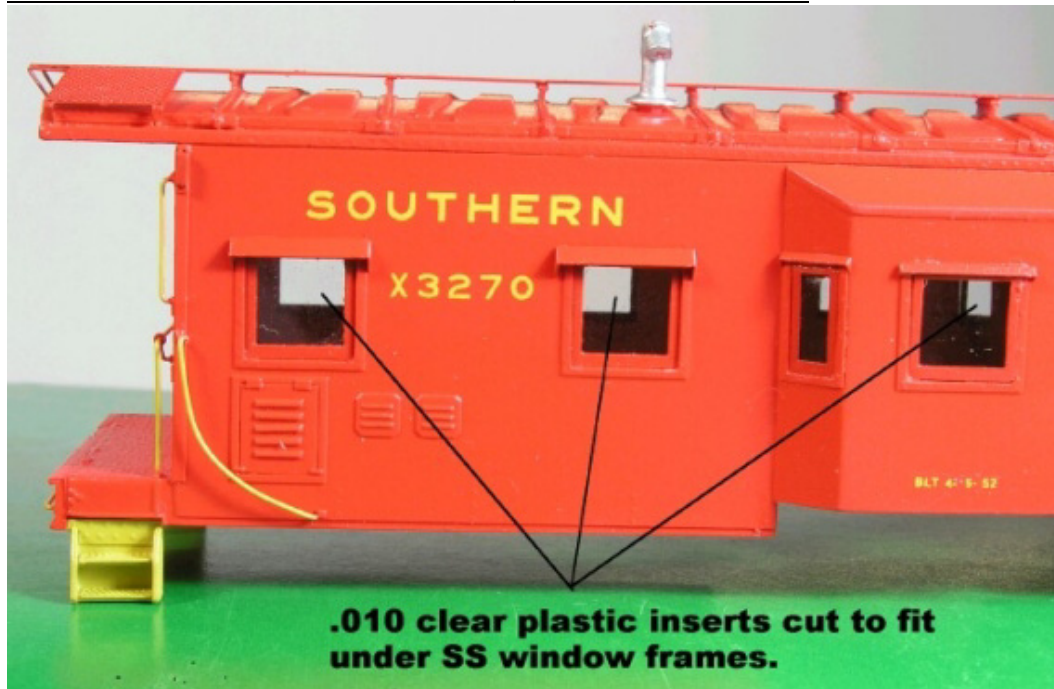
The Kristal Klear will dry clear in about 30 to 40 minutes. If you've been careful applying it, you'll never know you used it.

Next, apply Cyanopoxy (see Note 10 below) with the tip end of a short section of .010 brass wire, by placing a very small drop in the four (4) corners of the window frame to be installed. Now, slide the window frame into place using a sharp toothpick. Next carefully press the window frame into place making sure all four (4) sides are seated evenly. Install all window frames in place at this time. Allow to dry completely.

If you have worked carefully and slowly, you should have a cab full of very nice looking windows that would please any conductor having to spend his day watching his train.

**NOTE 10: I SUGGEST USING CYANOPOXY HERE SIMPLY BECAUSE IT WILL NOT FOG THE CLEAR PLASTIC WINDOWS AS SOME ACC TYPES HAVE BEEN KNOWN TO DO. PLEASE APPLY SPARINGLY.**

*Photo 21. Clear windows installed from outside, counter to kit instructions.*

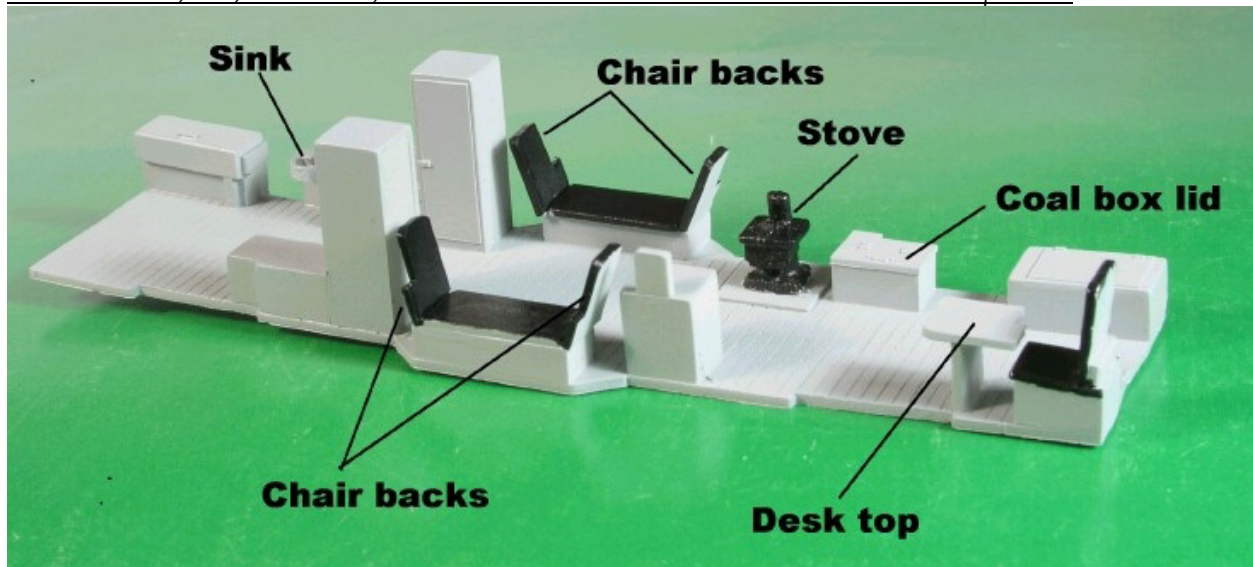


## Step 22

Thoroughly wash the interior and its detail parts in 90% alcohol, and then with warm water mixed with a mild dish washing liquid. Dry with a hair dryer. Install the stove, sink, coal box lid, conductor's desk and the four chair backs. I tilted the chair backs at a 60-degree angle to resemble the seats found in Southern Railway cabs.

The interiors of the Southern cabs were a light gray color. I used Modelflex SP Lark Light Gray (product #16-35). Paint the chair backs, conductor's seat and stove flat black (see Photo 22). Set aside and allow to dry.

*Photo 22. Stove, sink, coal box lid, conductor's desk and the four chair backs installed and painted.*



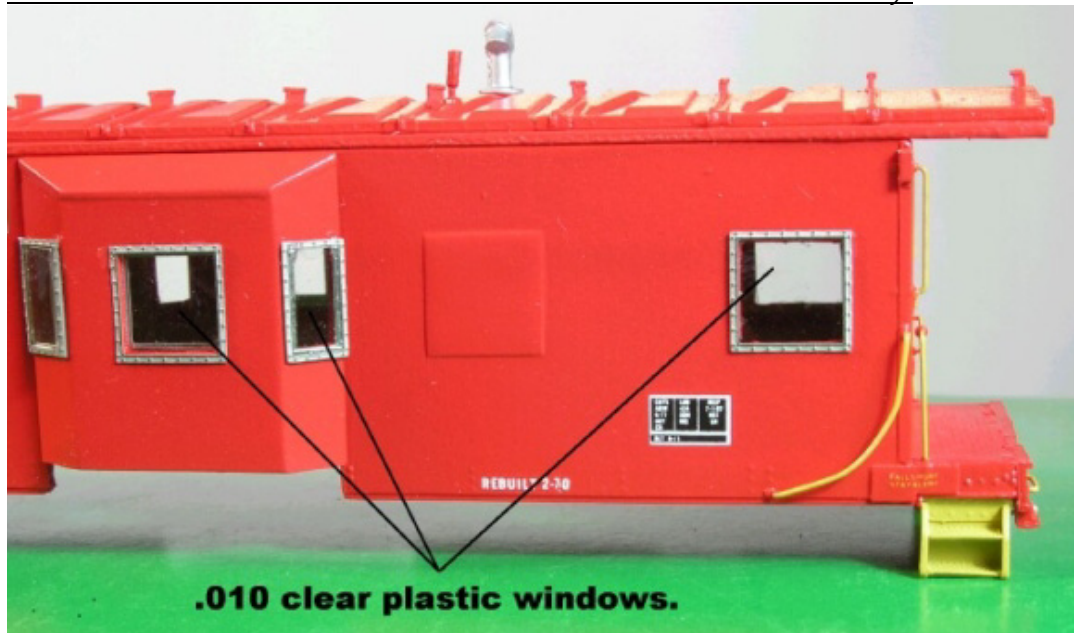
## Step 23 Rebuilt Cab

We add the windows and window frames to the rebuilt version of the WrightTrak SR caboose. As with the as-built version, I recommend deviating from the kit instructions and inserting windows I cut from my own .010" clear plastic sheet. Measure the four (4) square windows and cut to fit.

There are two ways to do this installation. The way I chose is to cut the windows to fit into the recess on the outside of the cab. This method requires you to be more accurate in making your measurements, but I think the results are well worth the time and effort. The second method (per original kit instructions) is to cut the windows and fit them on the inside of the body shell. In either case, I suggest that you use Cyanopoxy or the equivalent to secure the clear windows in place as this adhesive will not fog the clear plastic.

After the windows are in place, carefully glue the stainless steel window frames in place. Be sure you test fit each frame and make sure you know how and where each frame will be positioned. This step will prevent you from getting unwanted glue on the body shell. Install all window frames and allow to dry.

*Photo 23. Rebuilt version cab with windows and frames installed from outside body.*



## Step 24 As built Cab

Carefully line up the slits in the end reflectors and glue the two sides together making sure that no cement gets in the slit. There should be one yellow side and one red side. When completely dry, place the handle in the top hole in the support and slide the end reflector onto the handle.

Now position the tip of the handle into the bottom hole. I would suggest that you secure the tip of the handle with a drop of glue to prevent it from coming loose and falling out. The reflector should spin on the handle if it has been installed correctly. Install the end railings, *but do not glue in place*.

Now, carefully place the brake wheel support onto the rear of the cab by sliding the brake wheel under the horizontal brace. Do not bend or remove the two locating tabs found at the bottom of the brake wheel stand, as we will use these tabs as locators for the position for the brake wheel stand.

### REFER TO PHOTO 24.

NOTE 11: POSITION OF THE UPPER RUNG FOUND ON THE BRAKE WHEEL STAND.

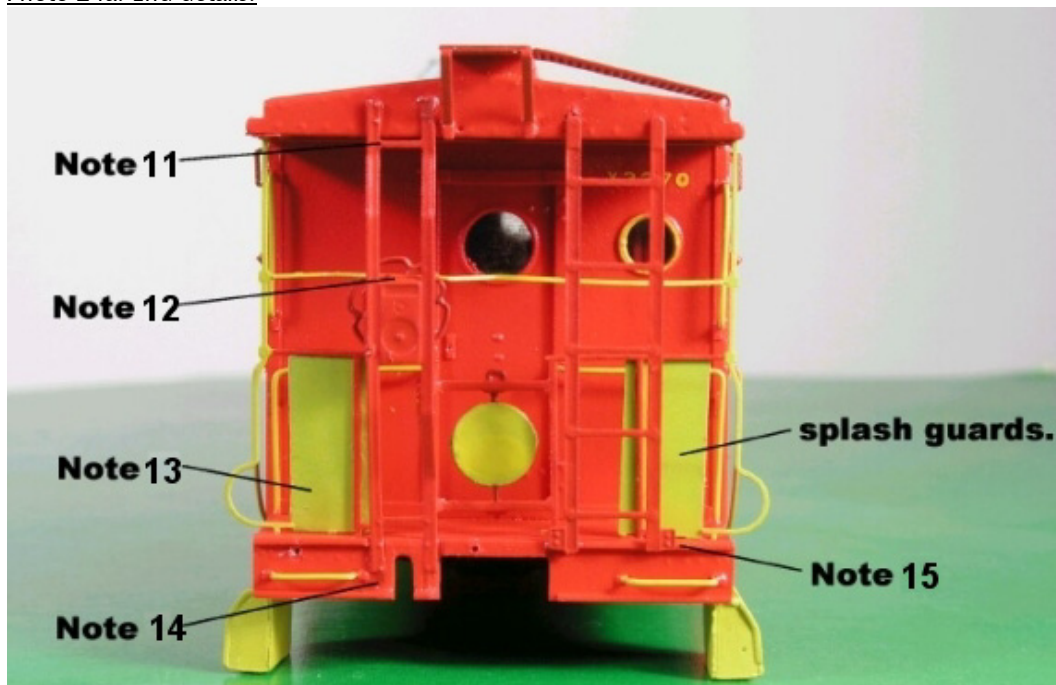
NOTE 12: THE HORIZONTAL BRACE SHOULD REST ON TOP OF THE BRAKE WHEEL ASSEMBLY.

NOTE 13: POSITION OF THE TWO SPLASHGUARDS.

NOTE 14: DO NOT BEND OR REMOVE THE TWO LOCATOR TABS FOUND AT THE BOTTOM OF THE BRAKE WHEEL STAND. THE TWO TABS SHOULD REST ON THE BOTTOM RIDGE OF THE END SILL WHEN GLUED IN PLACE.

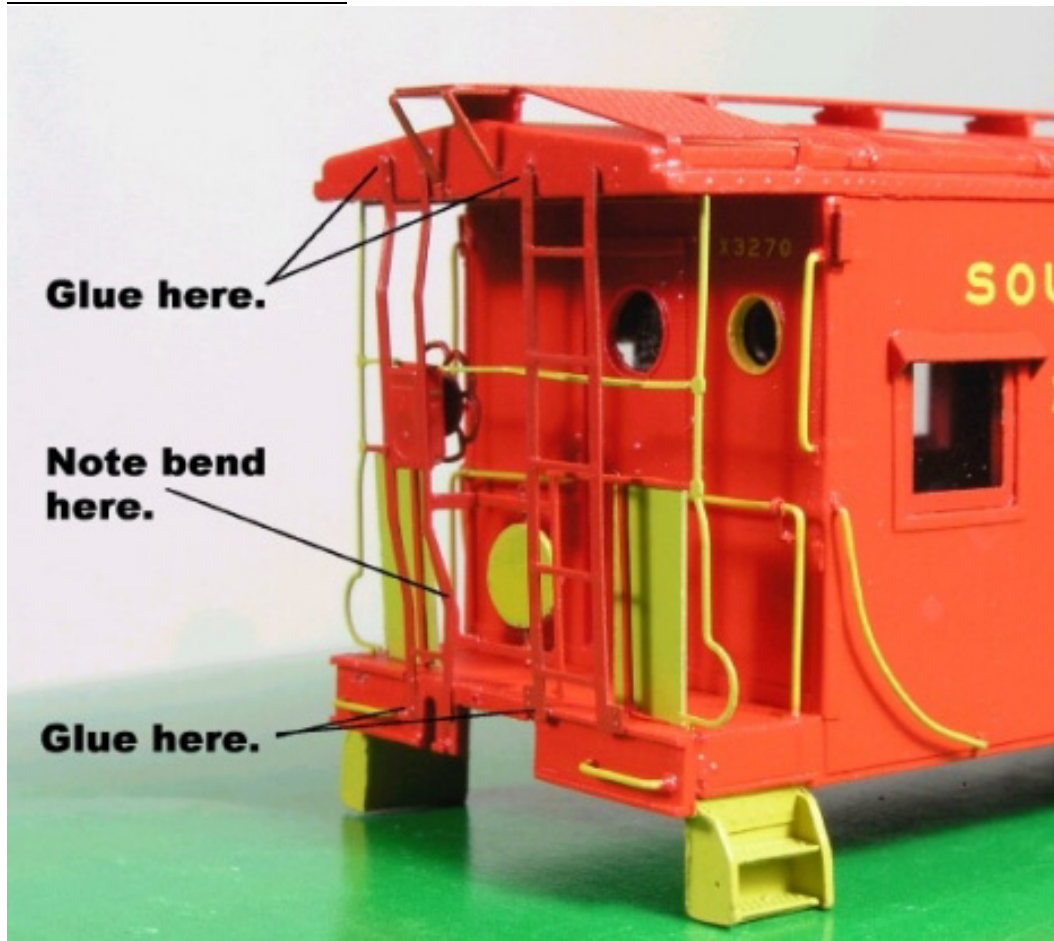
NOTE 15: POSITION OF THE BOTTOM AND TOP OF THE LADDER.

Photo 24a. End details.



Test fit the angle of the brake wheel stand and the bend in the end railings (see Photo 24b). You may have to remove the end railings and re-bend to achieve a good, close joint between these two parts, but be sure to do so before you cement any parts in place. If you are satisfied with the fit between these parts, glue the end railings in place making sure the two outer posts are in a 90-degree position (straight up and down in both directions). Next, slide the brake wheel stand in place and glue to the fascia plate and to the bottom of the end sill. Next, glue the ladder in place and allow to dry. Once the ladder is dry, glue the two splashguards to the end railings as shown in Photos 24a and 24b. Finally, glue the brake wheel stand to the end railing and set aside to dry. Now, turn the caboose around and repeat the last two steps to the other end of your caboose.

*Photo 24b. As-built end details.*



## Step 25 As-built Cab

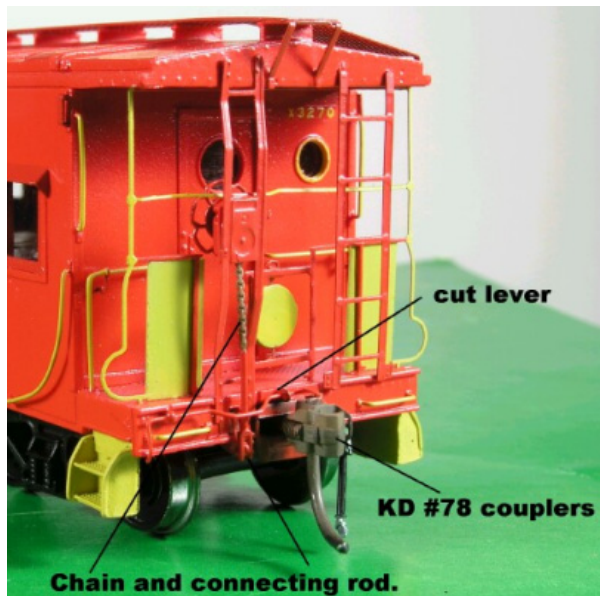
Carefully insert the painted interior into the body shell and make sure it fits without distorting the caboose shell. Next, slide the under frame into place and make sure it fits correctly. You may have to notch the four truck bolsters where the semi-circular grab irons fit into the shell and the coupler pad ends might need to be filed to fit flush into the shell floor. When satisfied with the fit of these parts, carefully glue the under frame to the shell in no more than four places and use the glue sparingly in case you ever need to re-enter the shell some reason.

If you choose to use the Kadee #78 coupler and coupler pocket, carefully remove a tiny sliver of resin from both sides of the coupler pocket to allow for the width of the coupler housing (see Photo 3a). DO NOT force the coupler in place, as the resin will split in this area. Next, while holding the coupler pocket in place, drill the correct size hole for the longest screw included in the #78 kit. Now install both couplers.

Next, install the trucks of your choice. The trucks included in the kit are correct for the as-built version of the Southern cab and they are very nicely done and will operate well.

Install the bell cranks of your choice in the end sills of the cab. I chose to use the one found on the Tichy brake set supplied in the caboose kit as it looked to be more accurate and because it's plastic (see Photo 25a).

*Photo 25a. As-built end details.*



Carefully drill a # 66 hole into the bottom center of the brake wheel housing and insert (DO NOT GLUE) the plastic chain found on the Tichy parts. Next, glue the connecting rod to the bell crank and allow to dry. Next, pull the chain down to meet the rod and glue together as shown in the scan. Allow to dry completely. Bend the coupler cut lever as shown and install in place using two eyebolts as supports.

Paint the chain with Modelflex Railroad Tie Brown and then paint the connecting rod, bell crank and cut lever with CB&Q Red.

Flip the caboose around and complete the other end.

Glue the six bay window supports and re-railers in place and paint with Modelflex CB&Q Red. Allow to dry.

## Step 25 Re-built Cab

Glue the end railings and brake wheel support in place making sure the railings are in a 90 degree position. Carefully slice a "sliver" from both sides of the coupler pockets so the KD #78 couplers will fit in the pocket (see Photo 3a.).

Install the cab interior or weights in place. Install the underframe and tack in place making sure the coupler pads are level with the underneath of the caboose floor.

Add the three bay window triangular supports on both sides of the cab. Carefully remove the inside bearing from the KD truck and install the generator making sure it is lined up with the axle.

*Photo 25a. Re-built end details.*



Add the brake chain and connecting rod as shown. Allow glue to dry. And then paint as shown (see photo 25b). Install the KD # 78 couplers with the hardware included in the coupler kits. Install the cut levers and paint as shown.

## Photos of finished models

As built prior to weathering.



As built with weathering.



Re-built prior to weathering.



Re-built with weathering.

