

Recent Projects from the Workbench

Naperville 2025 RPM Meet

Oct 16-18

George Toman



I have at past RPM's mostly given complete in-depth clinics for only one car such as this year's gift kit seen finished below. In this presentation I will cover multiple projects and discuss some of the more unique details and show some construction techniques. Some links will be provided to further details or complete builds.



2025 Found My Work bench full of many projects

Below are five of them I will discuss

Scratch Built Swift 36ft wood reefer



SPMW Boarding Bunk car from Resin and Branchline parts



Westerfield I-GN SS that had no underframe



SnT FGE reefer from the 2025 Cocoa Beach meet



2025 Naperville FRISCO gift kit



The Swift 37ft Meat Reefer



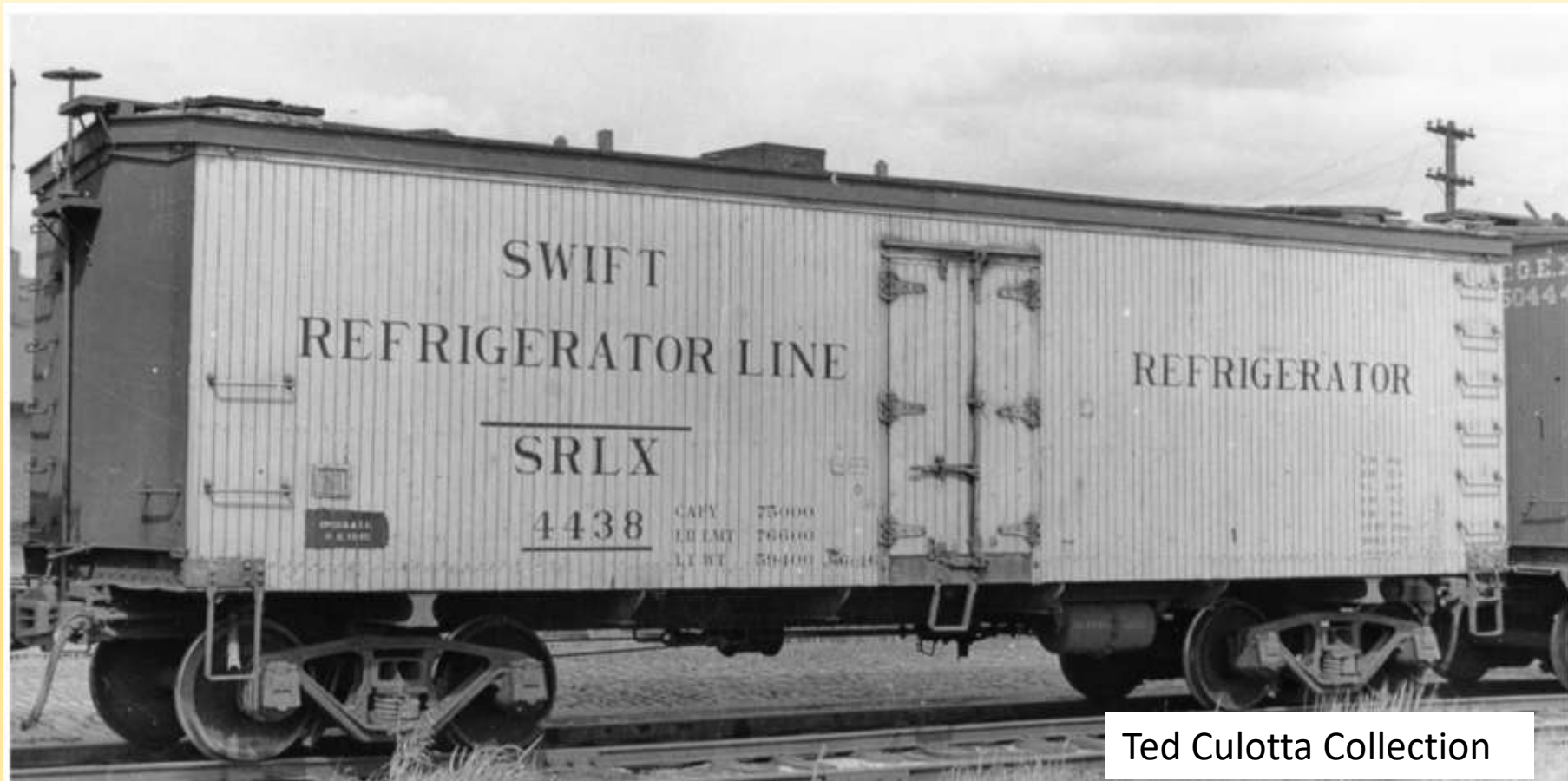
Ted Culotta Collection

This project started as a challenge from friend Ryan Mendell. He suggested a joint build starting with a Tichy Underframe and styrene. After reviewing the photos, I decided that I would scratch the whole car from styrene. Here are a few features I wanted to capture.

Note thin roof boards over hanging fascia

Note fascia appears to be two piece. Wood on metal

Unique Bolster Shape and I Beam Cross bearers with S shaped angled ends



Look closely at door and various width boards

Note different corner steps

Ted Culotta Collection

Roofing boards are 13/16 x 5 1/4 inch T&G
In HO this would be .010x .060



Roof details for a FGE Reefer from 1940 car builders

I was also looking for a more accurate method to model the wood floors as seen below on the Milw Road URTX horizontal seam reefer 37312 at Illinois Railway Museum. Using .060 V groove to me does not look correct. It is not surprising that this 70 plus year old reefer has some board separation.



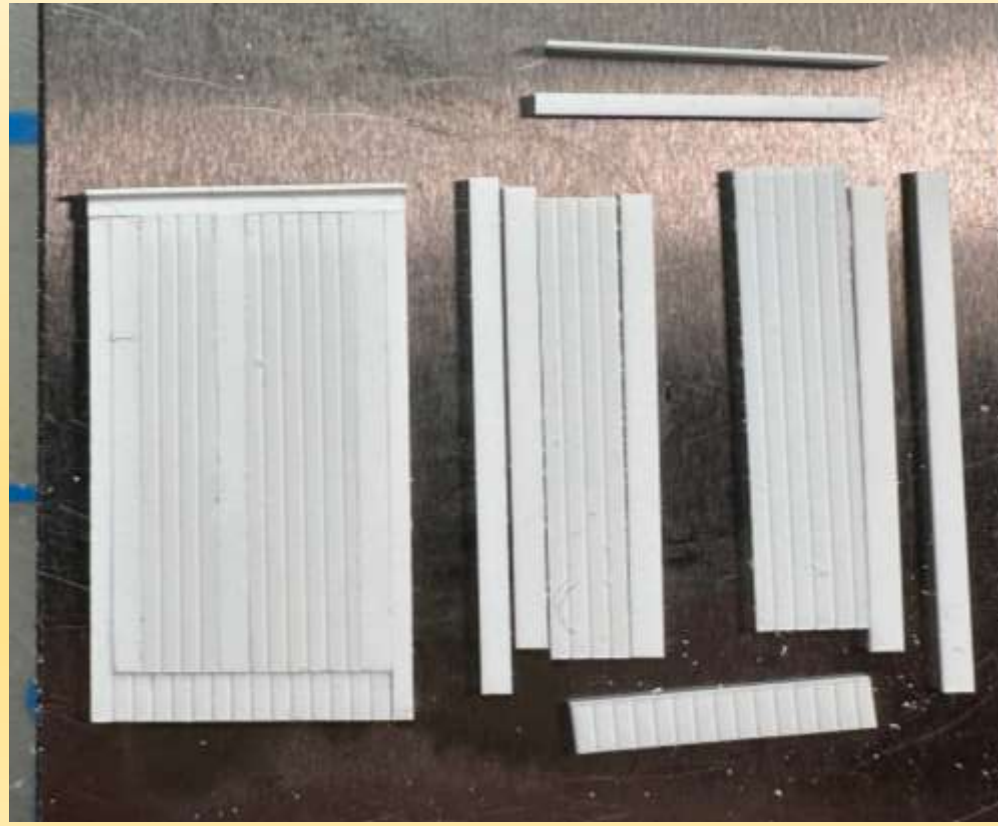
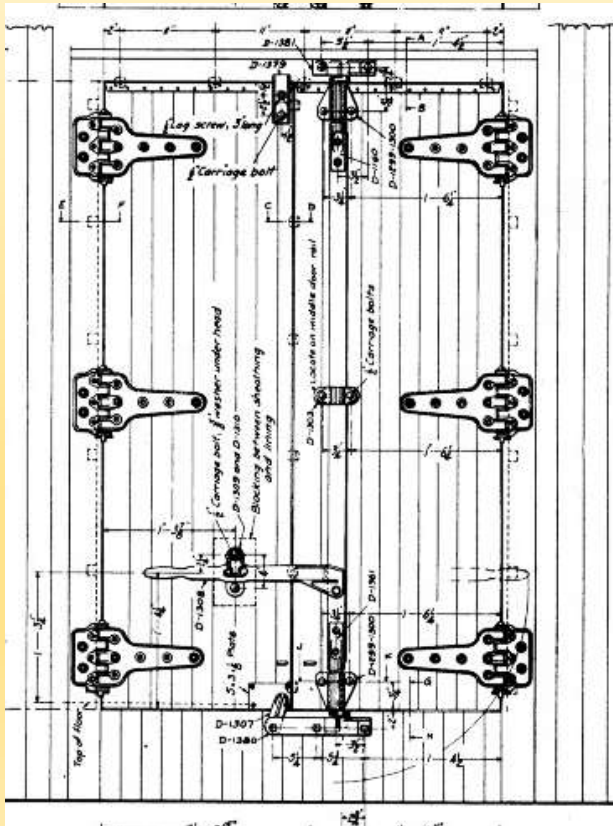
Using data from an ORER I used the dimensional data for door size, length, width and height.

I started by Building a floor from styrene using individual boards with wood grain created with a UUM-USA Micro Saw Blade. Boards are .020x.060 styrene



Note: Deluxe Materials Plastic Magic 10sec cement was used to glue the boards. This is not as hot as Testors or Tamiya

Below is some detail on building the door. I used drawings from a Car Builders Cyc to build a correct door using individual boards as shown below. The boards on the door are not all the same width.



Here is the construction of one side with the facia and door in place

Upper facia made from .010 thick and lower made from .005 thick styrene
Sides made from .020 thick HO Car Siding glued to a .030thick subbase

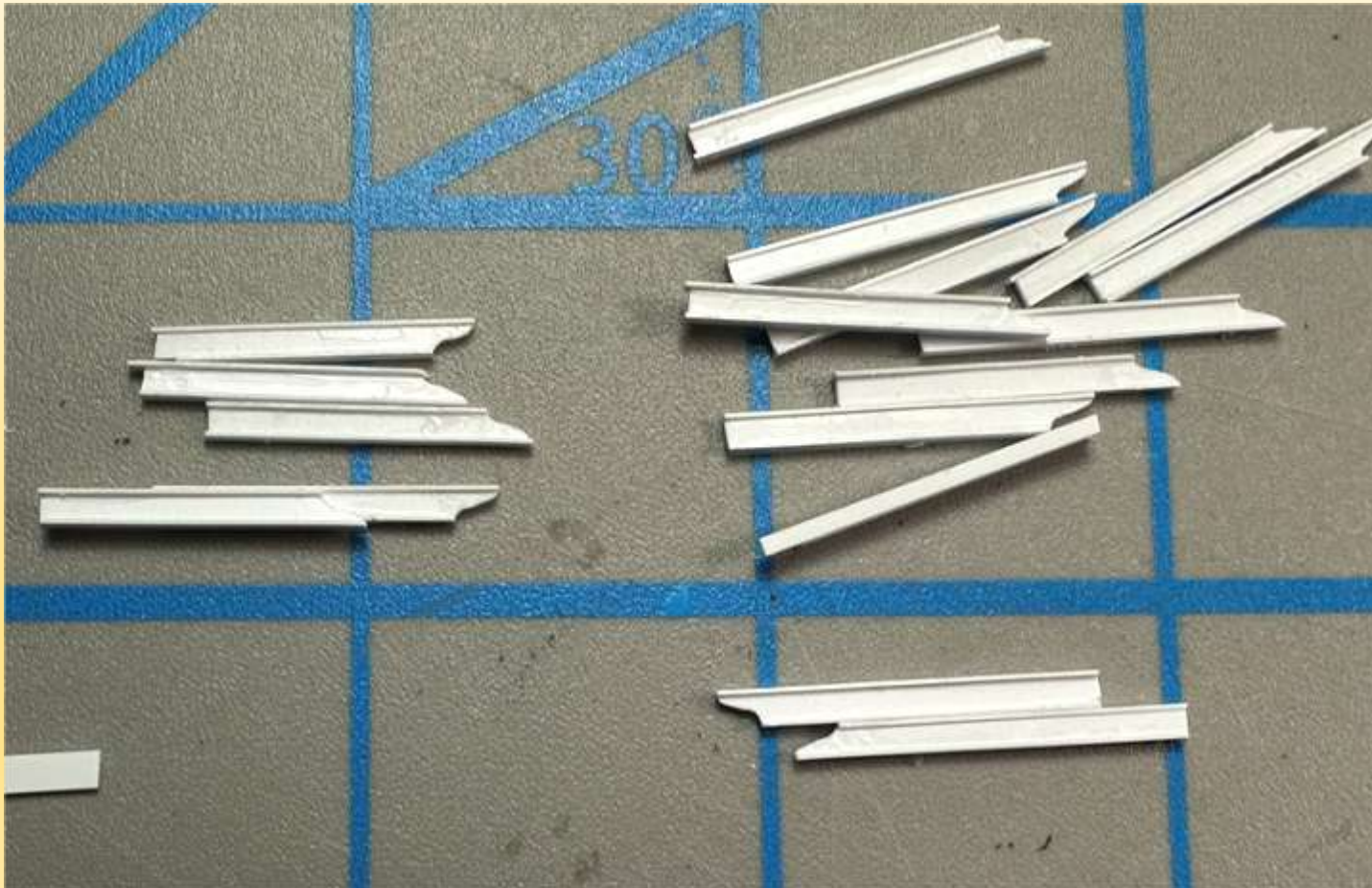


Note that the side is made longer than necessary and will be trimmed to width.
This was a tip from Ted Culotta

The Bolsters started with the construction of an I Beam from Evergreen Strips. I then used .005 styrene inserted into each side of the I-Beam and used styrene cement to form it in place. Photo lower right shows using a brass wire to help form shape. When dry, I filled any open spots on the end , let dry and sanded smooth.



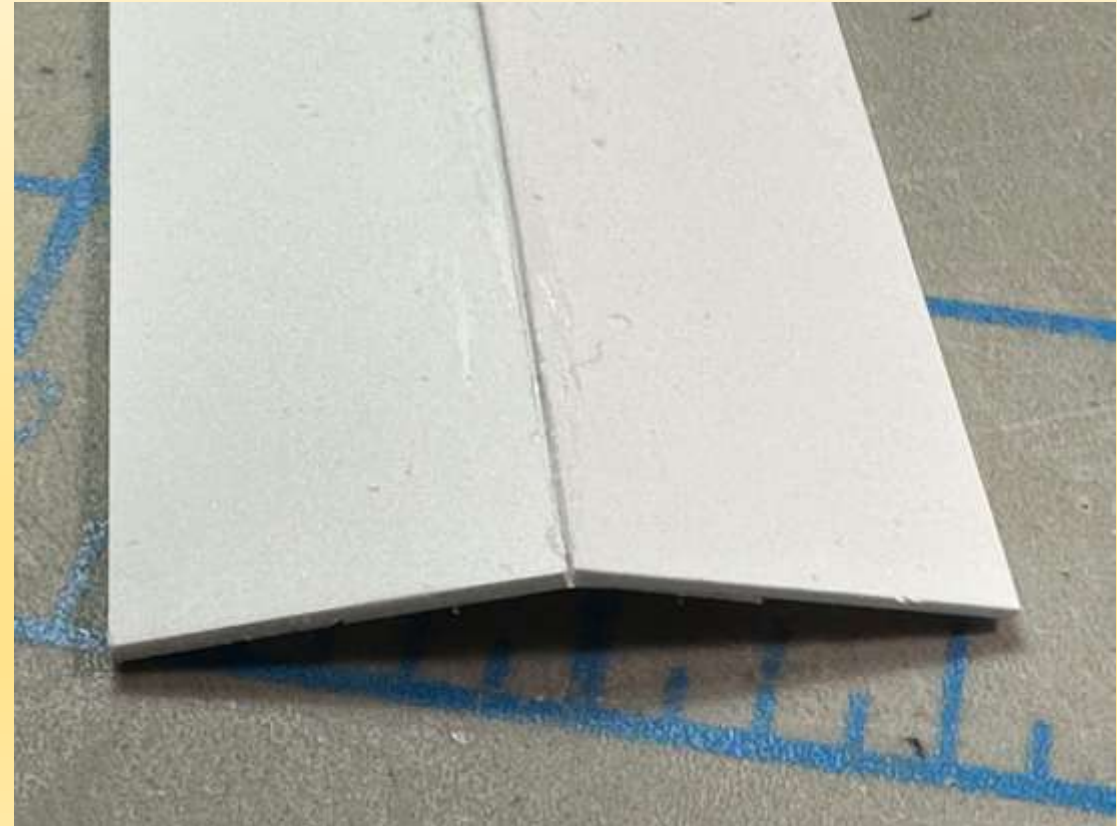
Cross Bearers were constructed from styrene and the ends shaped to a sort of S shape as on the prototype.



Various stages of construction showings sides, ends, underframe
Made mostly from Evergreen Styrene.



Individual .010x.060 styrene boards were used for the roof. I constructed a subbase of .030 thick styrene for these boards to be glued too. On the right you can see the subbase for the roof boards. I again used Deluxe Materials Plastic Cement

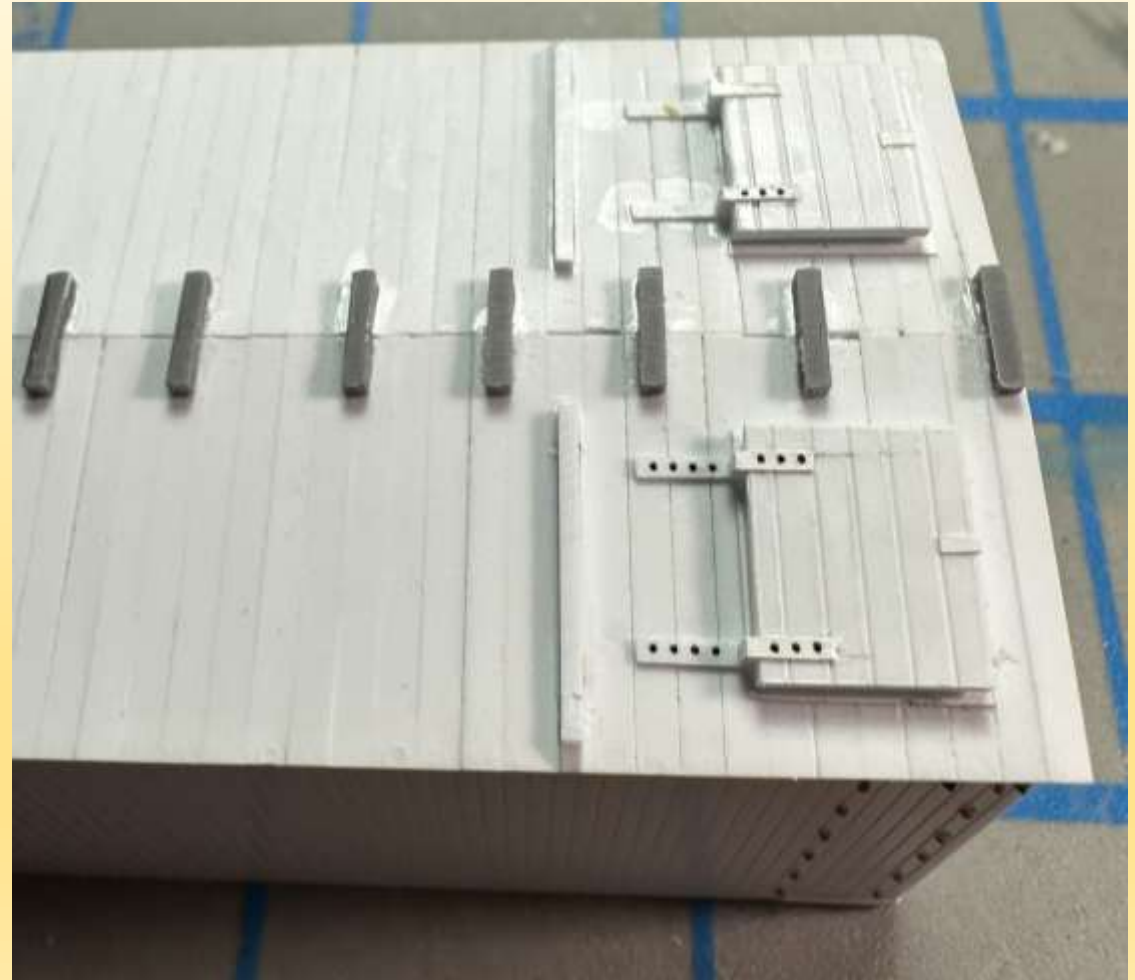


Details start to be added

End sill was made from
Evergreen Styrene C channel



Tichy running board support added and hatches cut
from styrene sheet and archer Rivets installed



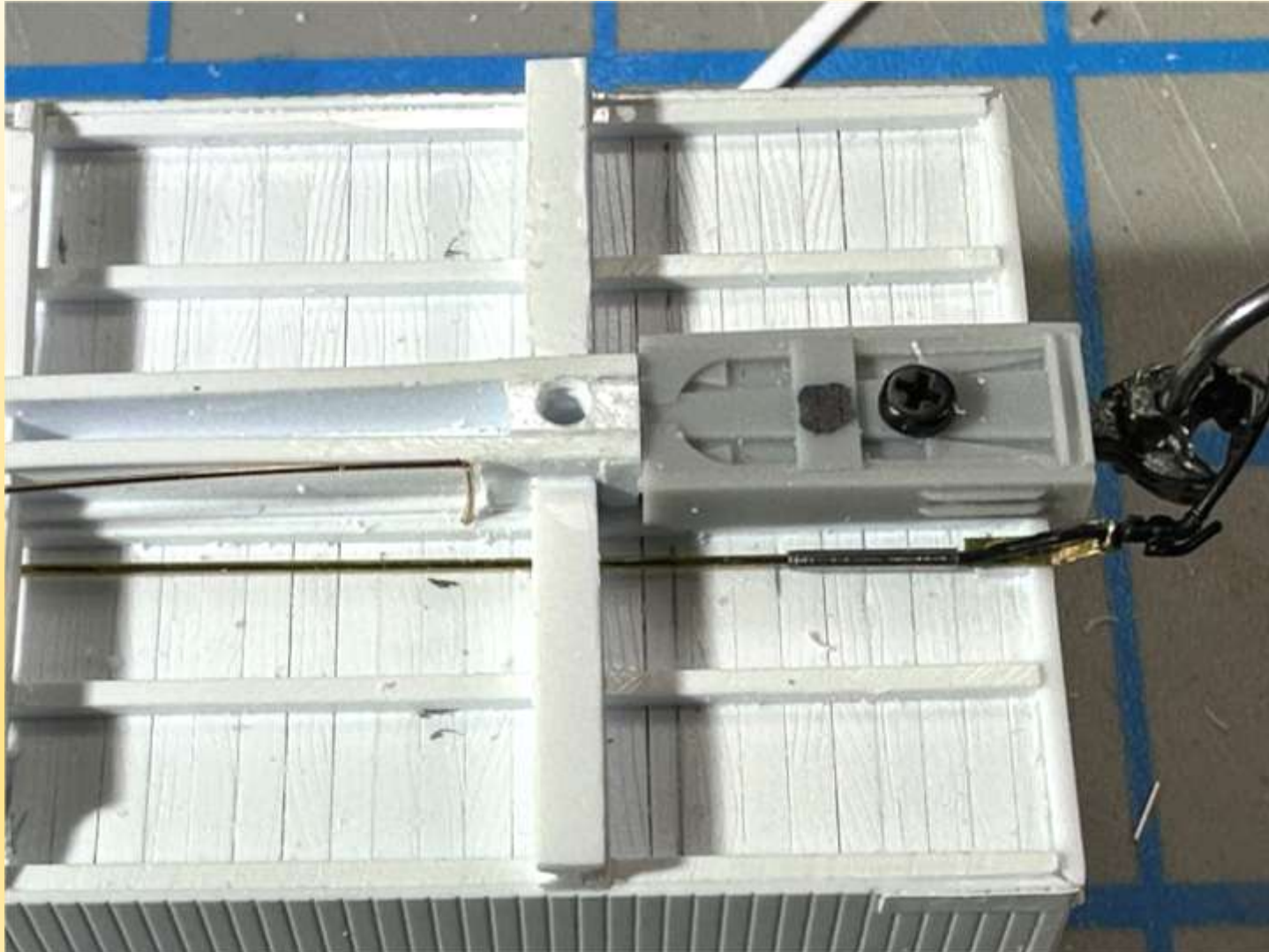
Tichy .020 rivets were used for the grabs
Grantline Nutbolts for the corners
Athearn harvested rivets for sill steps



Below is the layout of the AB Brake System for this car.



Resin Car Works semi-scale draft gear box was used along with Yarmouth PE air hose brackets and Moloco rubber air hoses



Note the effect of individual boards for the floor and wood grain.

Note the SS micro tube joining the rubber air hose to the train air line

Grantline reefer hinges and latch used for door hardware

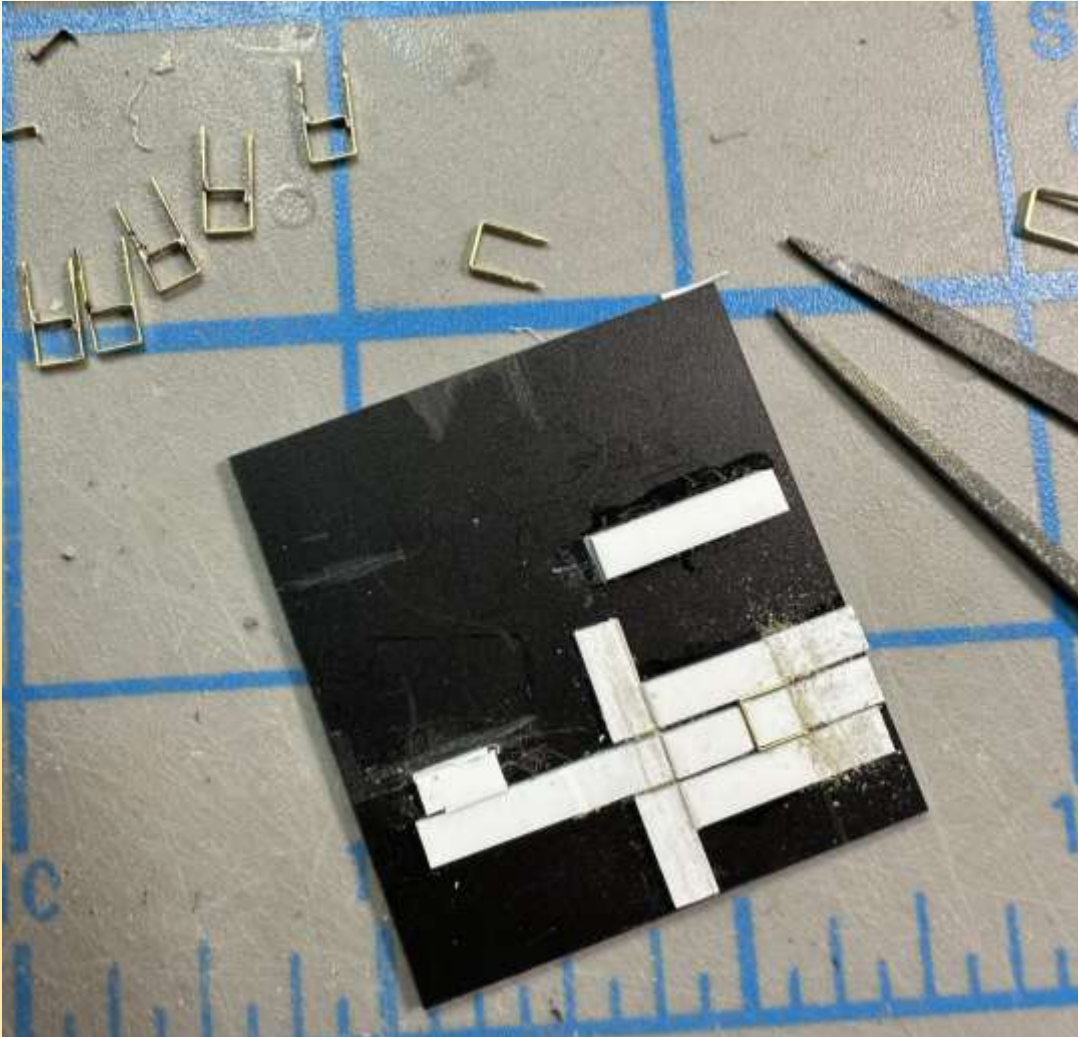
Athearn harvested rivets added to facia as seen in photos

Grabs bent from Tichy .010 wire

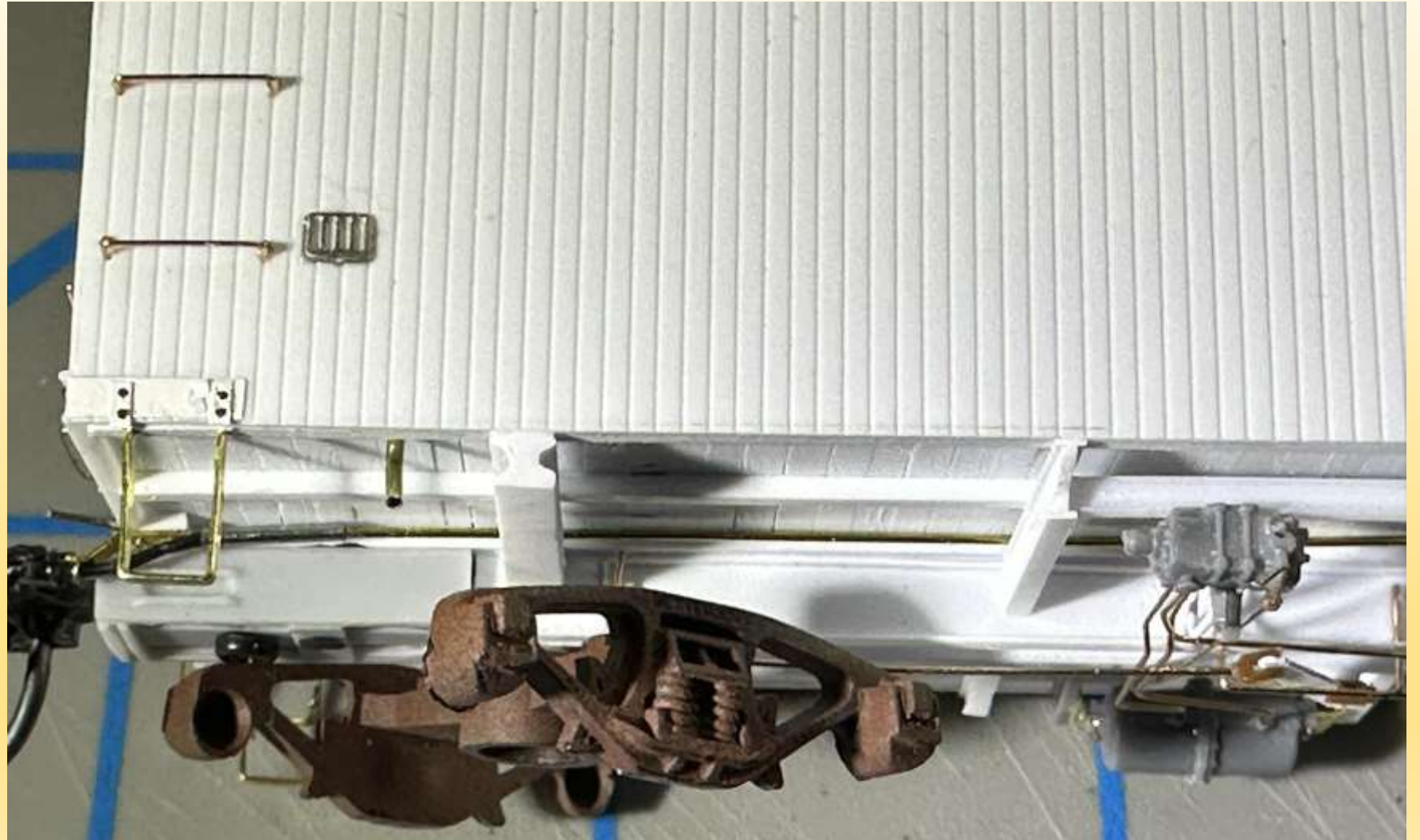
Sill steps bent from .010x.030 flat Detail Associates brass stock. Right side has a 2nd step soldered in place. Left side a U shape.



Construction of the sill steps used a styrene jig and formed from .010x.030 brass stock. The center rung was soldered in place



Custom Photo Etched defect card holder provided
by **Steve Hile** from a Swift Reefer Clinic



SS Micro tube was
bent and used for
the drains on the 4
corners

The B End

Tangent Brake Housing

Tichy Brake Step

Archer Rivets on the end
beam

Tichy .020 rivet heads
used by each grab



The effect of using individual boards for the roof



After discussing colors with Steve, he recommended a slightly darker roof .



Note drain tube

The car was finished with National Scale Cars Decals



Southern Pacific Boarding Bunk

The SP converted ex Pullman 12-1 sleepers into bunk cars for maintenance of way service.

A friend asked if I could build one for him

Tom Madden just happened to have some custom resin sides, roof and ends for a Pullman Tourist Sleeper that was an exact match of some of the SPMW cars.

What follows are some photos and tips used to build using a Branchline kit as a base



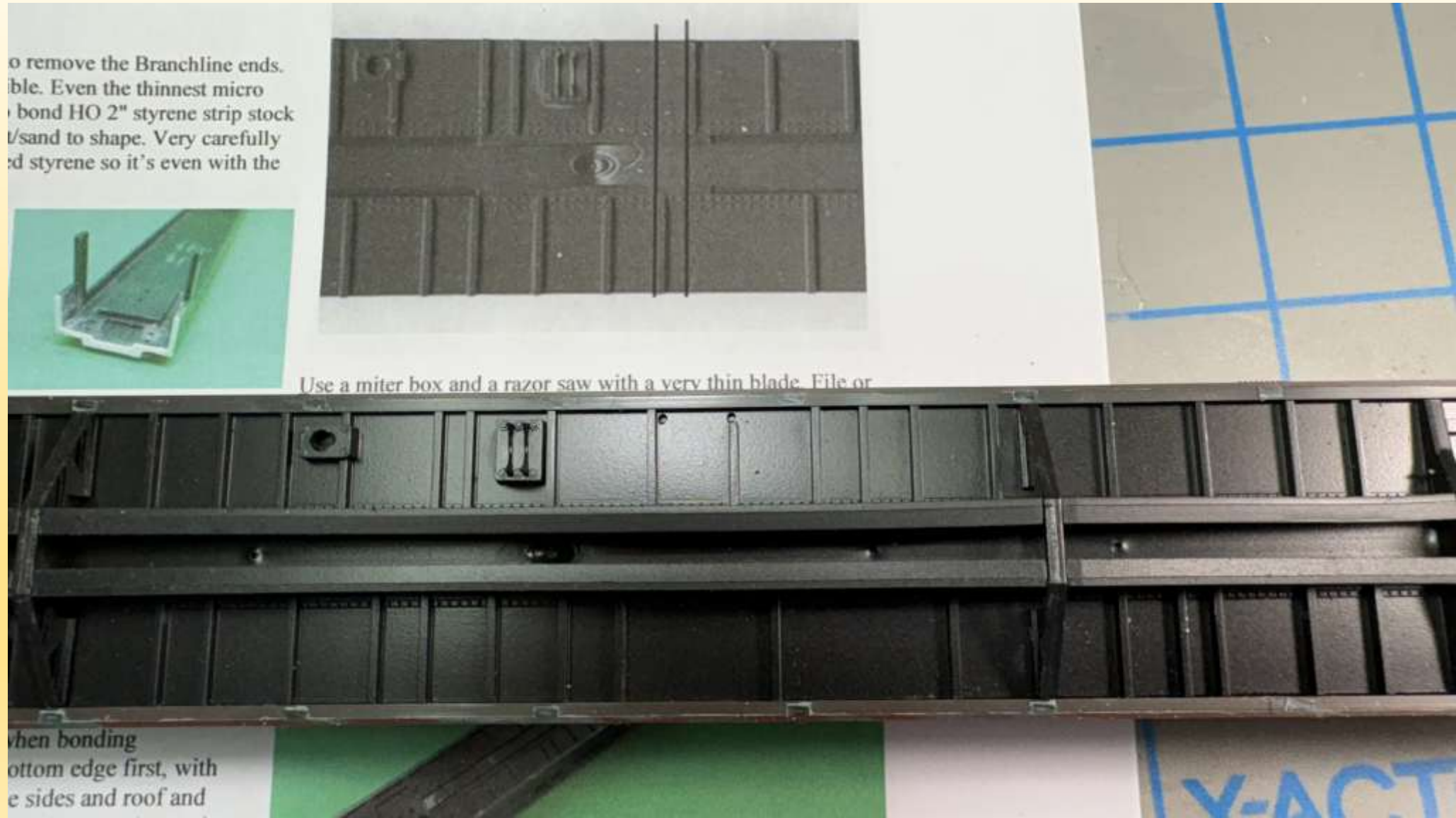
Unknown low-res photo sent by friend asking to build car



The early Pullman cars were about a foot shorter than the Branchline Car
This will require the underframe of the Branchline kit to be shortened by 1 scale foot



Below are Tom's instructions on where to make the cuts to shorten the underframe. I made my cuts to be .125 just under 1 Scale Foot allowing for some cleanup



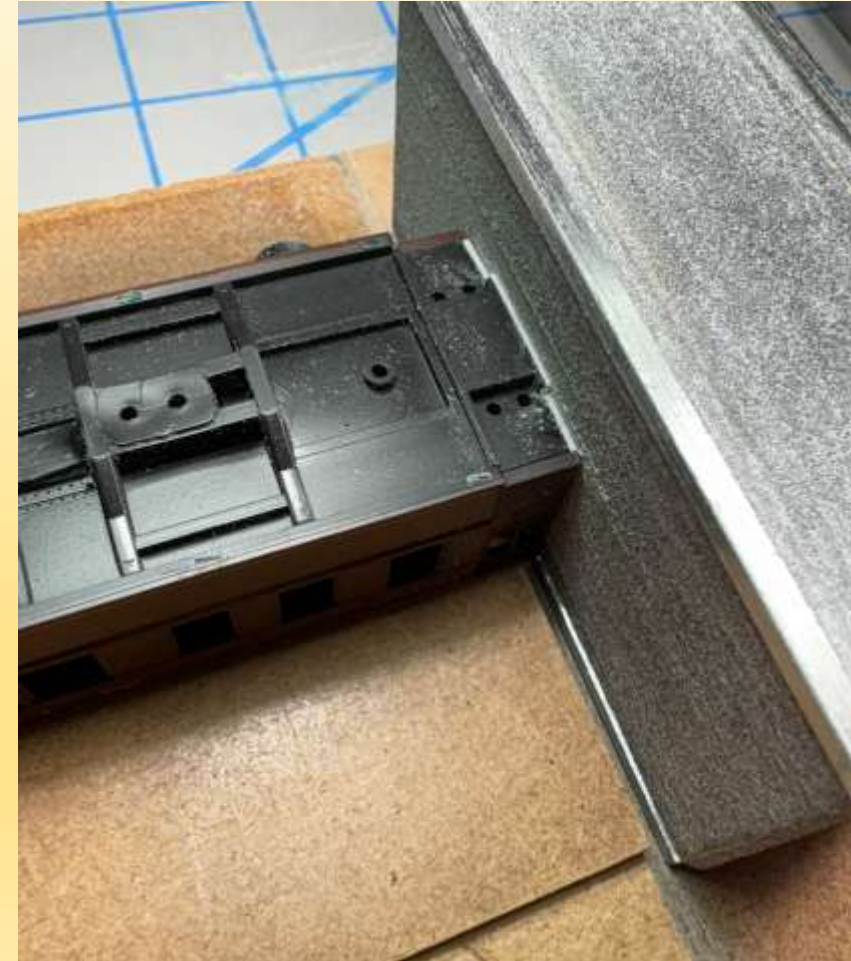
Micro Saw being used to
cut the .0125 out at
location Tom suggested.



A UUM-USA micro saw was used to cut the Brachline ends off as well to allow for correct round top resin ends



The cut ends were trued up with a NWSL Tru Sander. I added some .030x.060 styrene to make up for the lost material of the cut. Once dry, I sanded the ends a 2nd time ensuring a square flat gluing surface.



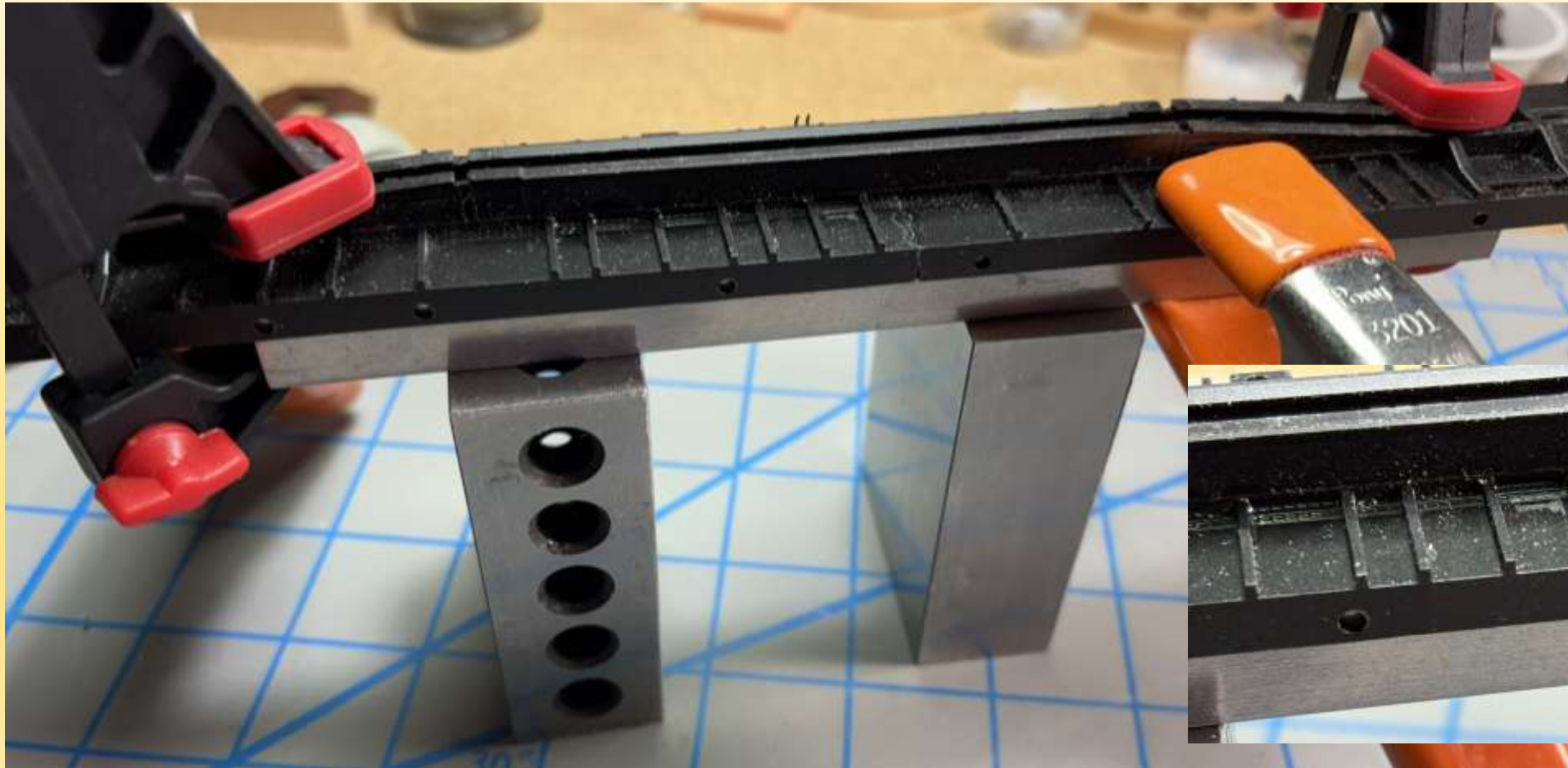
The 2 centersills also needed
to have the same .125
removed as seen to the right



To help maintain alignment and help straighten the warped underframe, the Branchline sides were pressed fit using the pin locators and holes in the underframe. I inserted the fishbelly center sill into their proper positions and glued the long ends of the sill in place, but not the short ends. Let dry toughly to minimize warp.

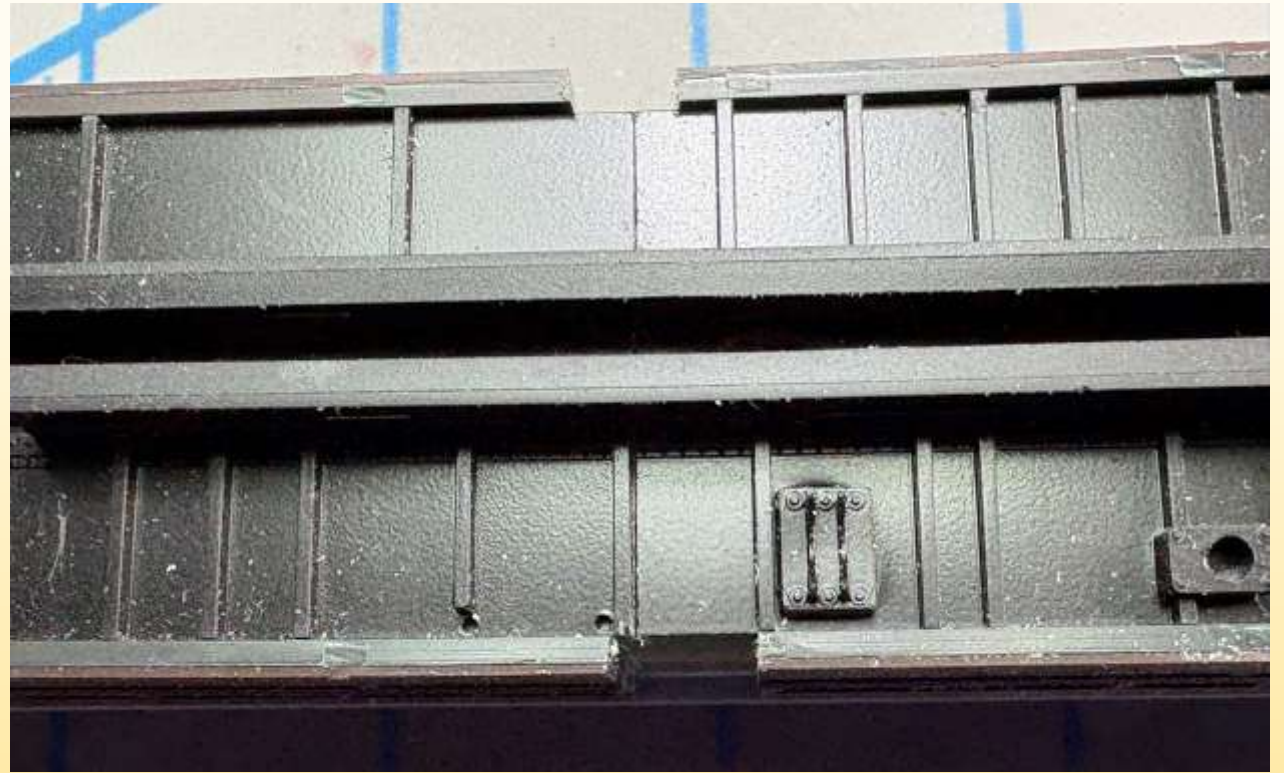


When I was happy with the fit and alignment, I applied styrene cement to the splice joint and shorter ends of the center sill that were previously left unglued. I then used some 1 inch Aluminum L channel on the underside of the underframe with clamps to keep everything aligned in the xyz planes

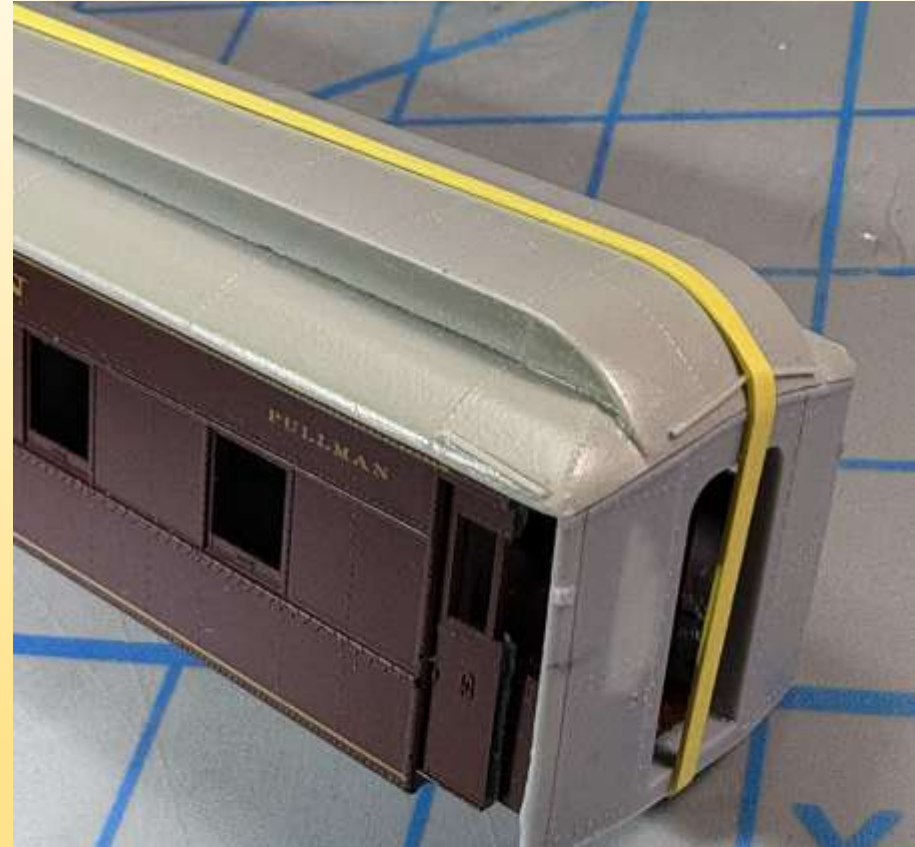


The Branchline sides had a small section cut out as shown to allow for the Now 1ft shorter underframe to be test fitted and sanded as needed to fit the length of the resin roof that is just held in place by friction. I also cut a bit off of each end as well.

Note: the slide below shows ends glued, which will be next step.

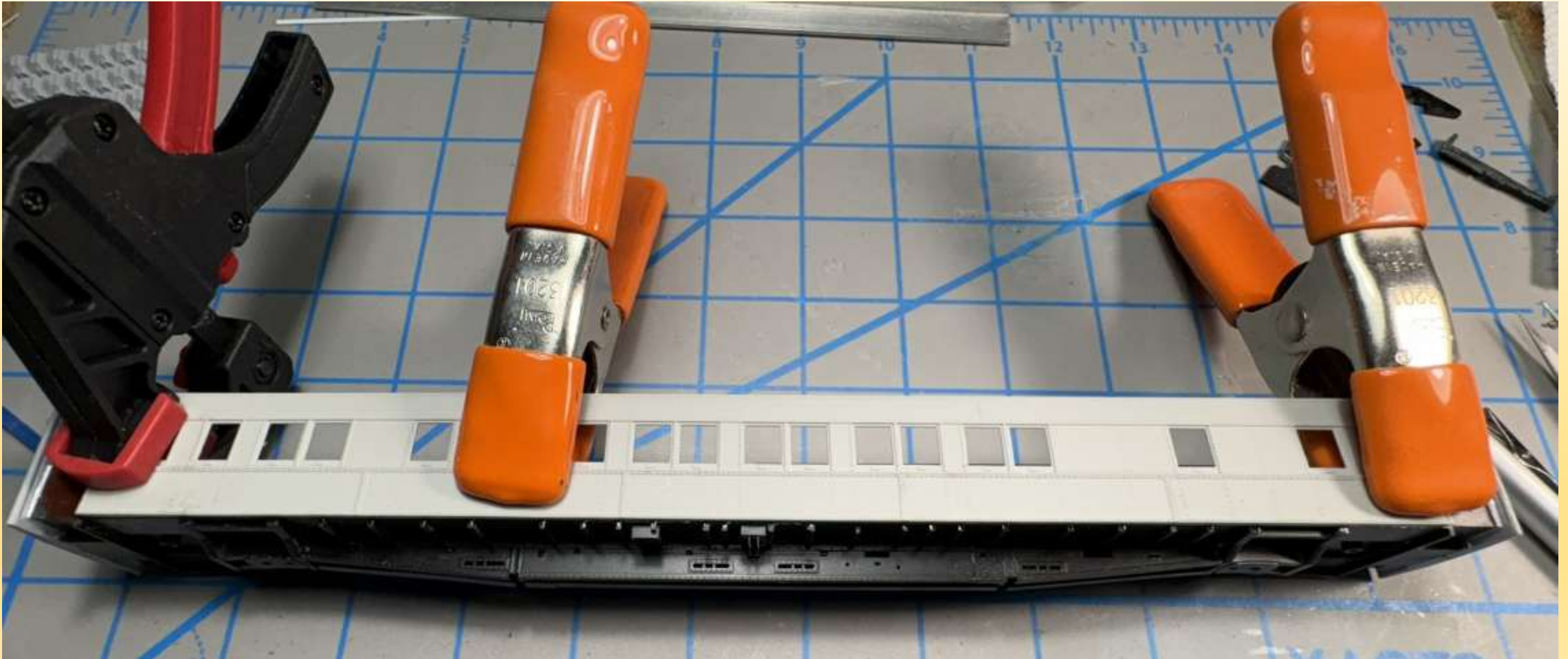


The shortened sides were reattached with the resin roof and held together with rubber bands. This allowed me to align the resin ends the to the roof and keep centered while glueing in place. This kept the glue from attaching the sides that are only being used to help align and add resin replacement parts

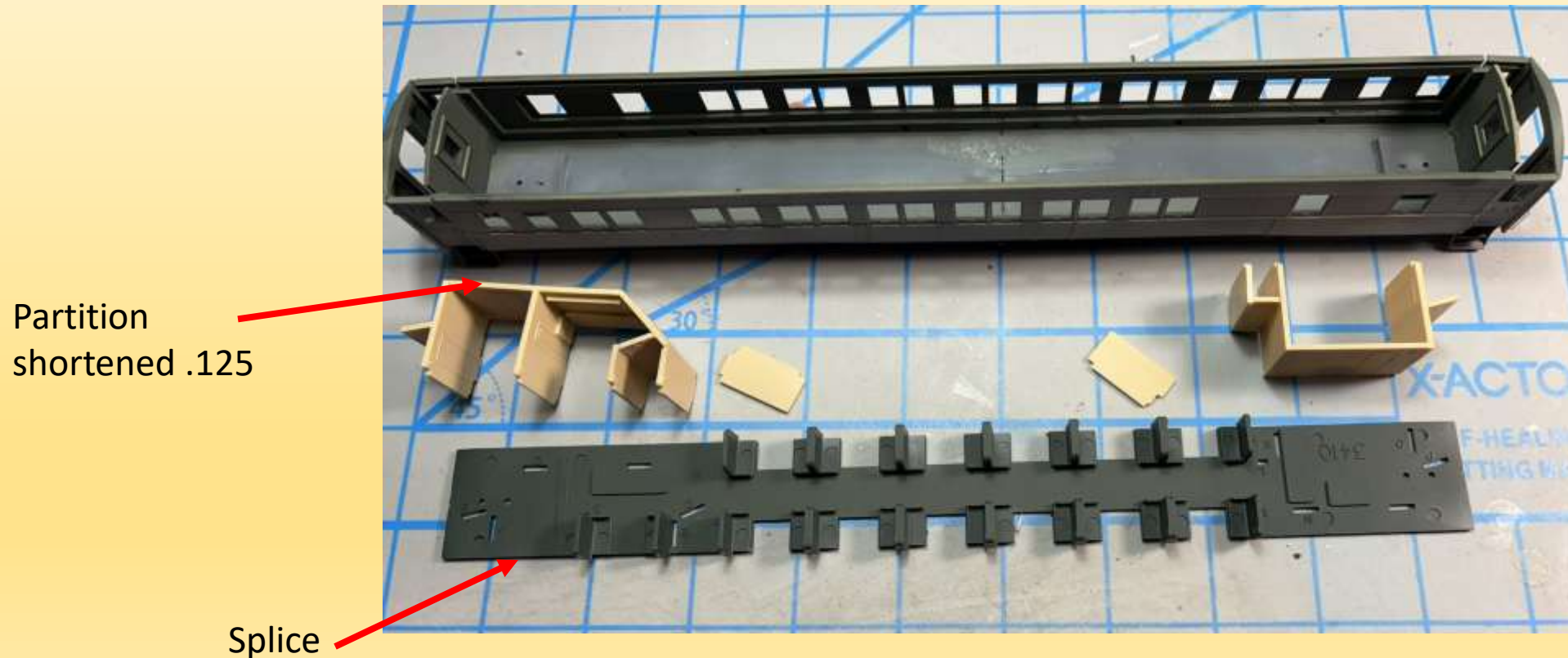


The roof, shortened temporary sides and underframe held with rubber bands, allowed me to verify and adjust ends before glueing them in place.

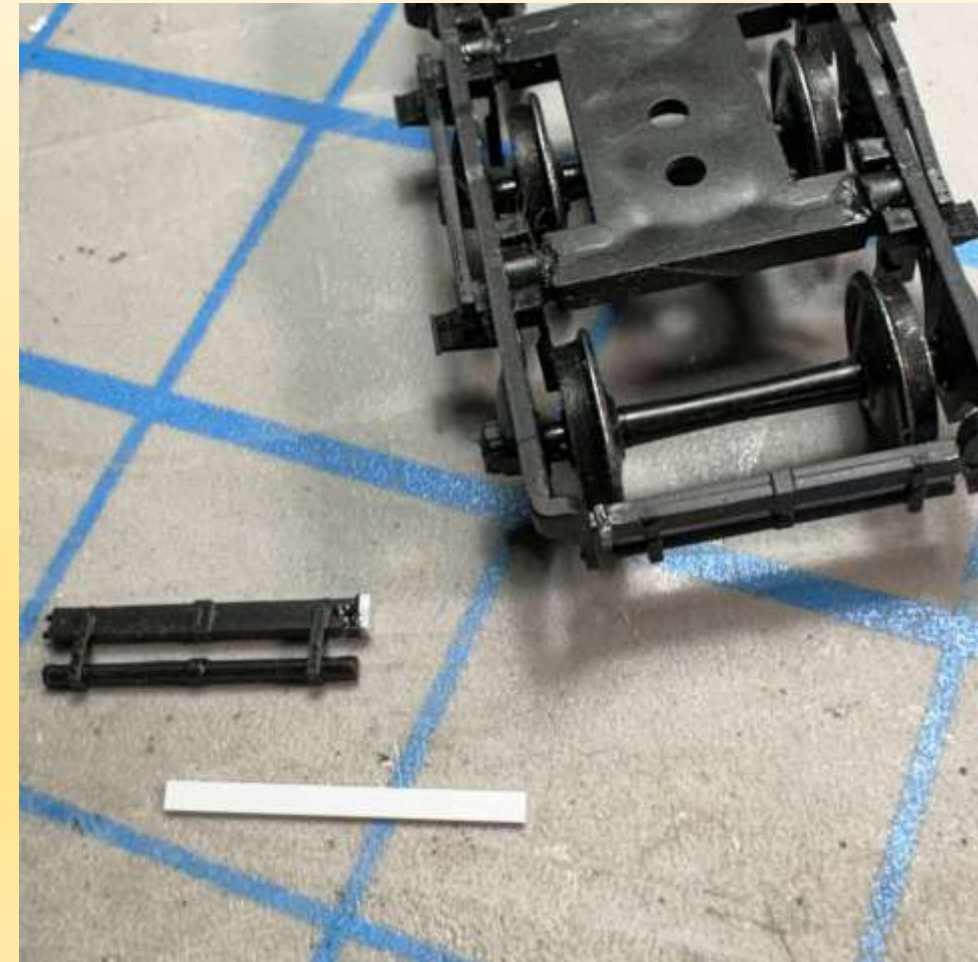
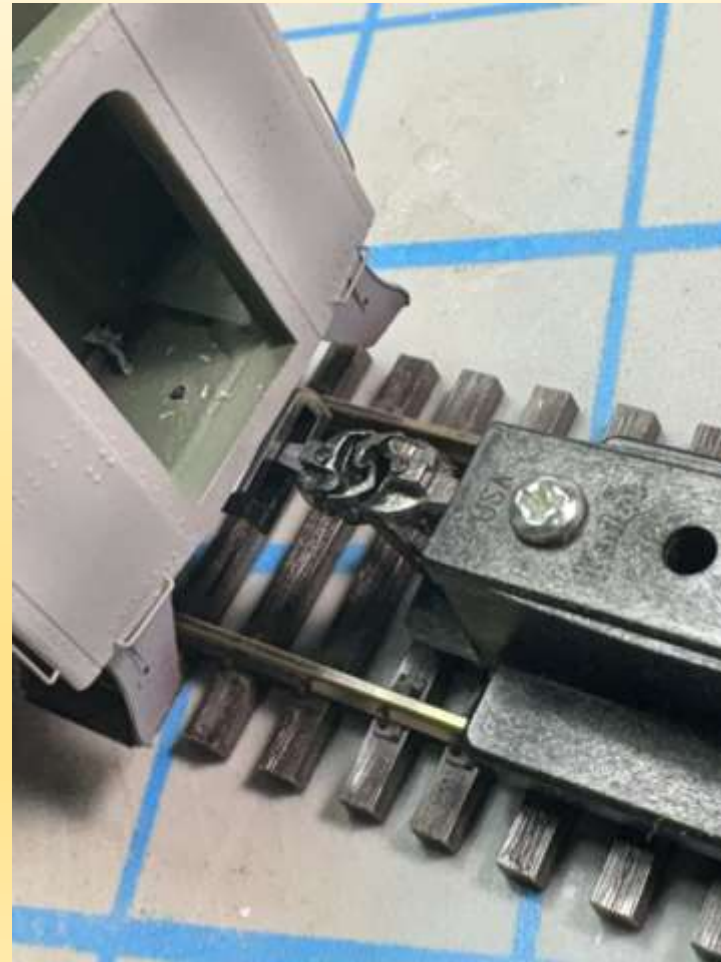
After the ends toughly dried, I centered the sides between them and aligned with bottom. Once in place I glued in place with a Medium Thin CA glue. I used clamps as shown to keep in place while the glue set up

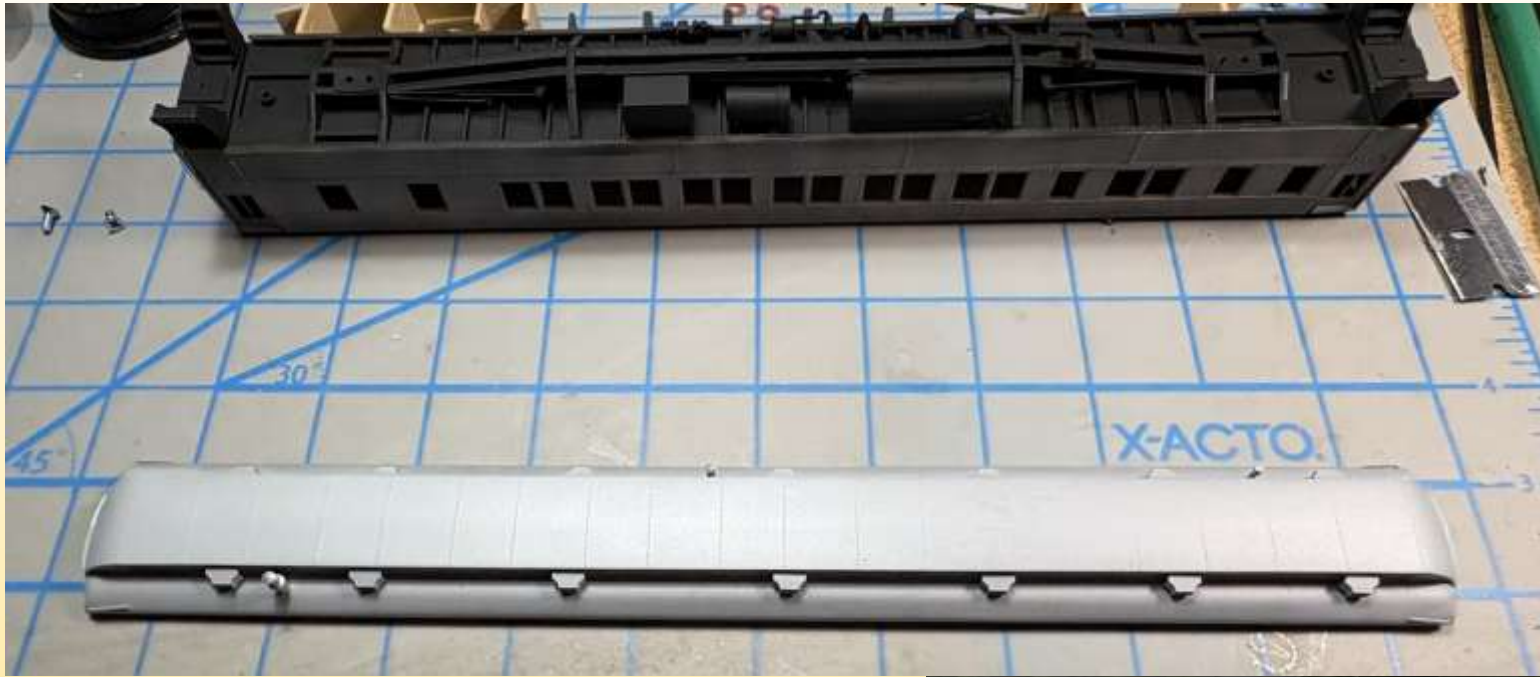


The interior also had to be shortened by 1 scale foot. You can see the splice on the left hand side near the end. The partitions were also shortened. I used a Vallejo green that was a good match to Pullman Green for the interior and Vallejo Tan for the partitions.



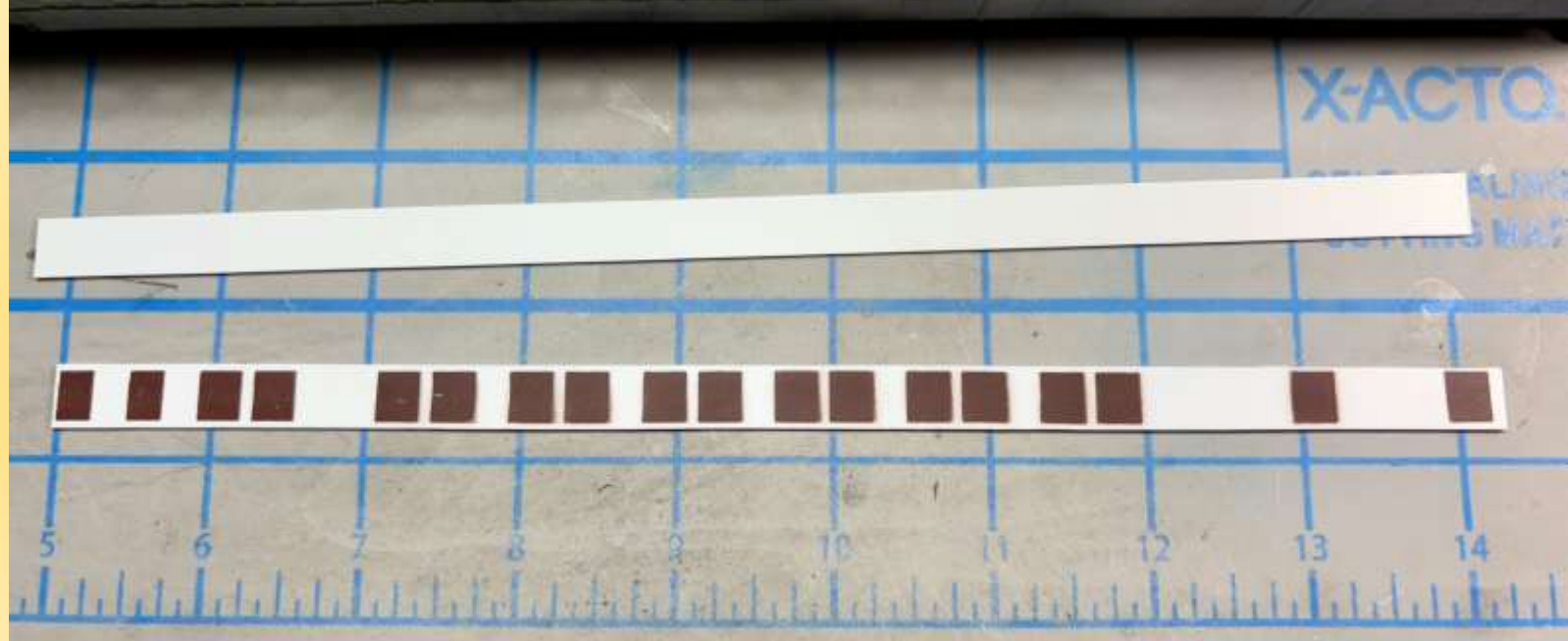
Kadee coupler boxes were body mounted to underframe and checked for height. The trucks were assembled with Kadee 36 inch code 88 wheels. I carefully adjusted the width making sure the trucks rolled freely. I found the need to add a small styrene shim to the brake beam for a proper fit as seen lower right photo.





The roof was painted silver with a bit of white added and the sides painted SP Red Brown.

To the right the white styrene strips were cut and inserted behind the windows as a paint mask.



Microscope Cover Glass was used for the window glass.

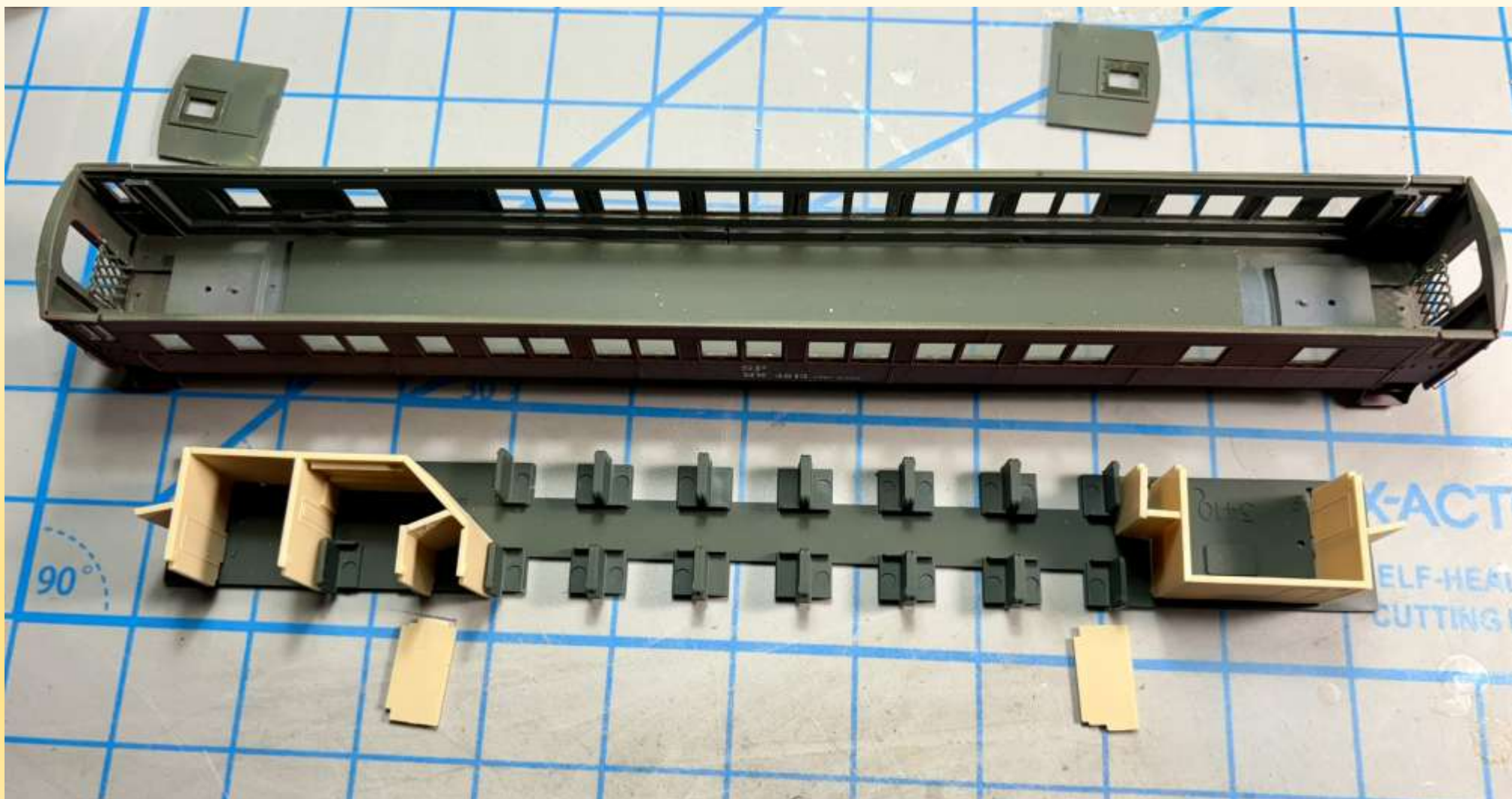
Digital calipers were used to measure, and a tungsten scribe was used to scribe and break



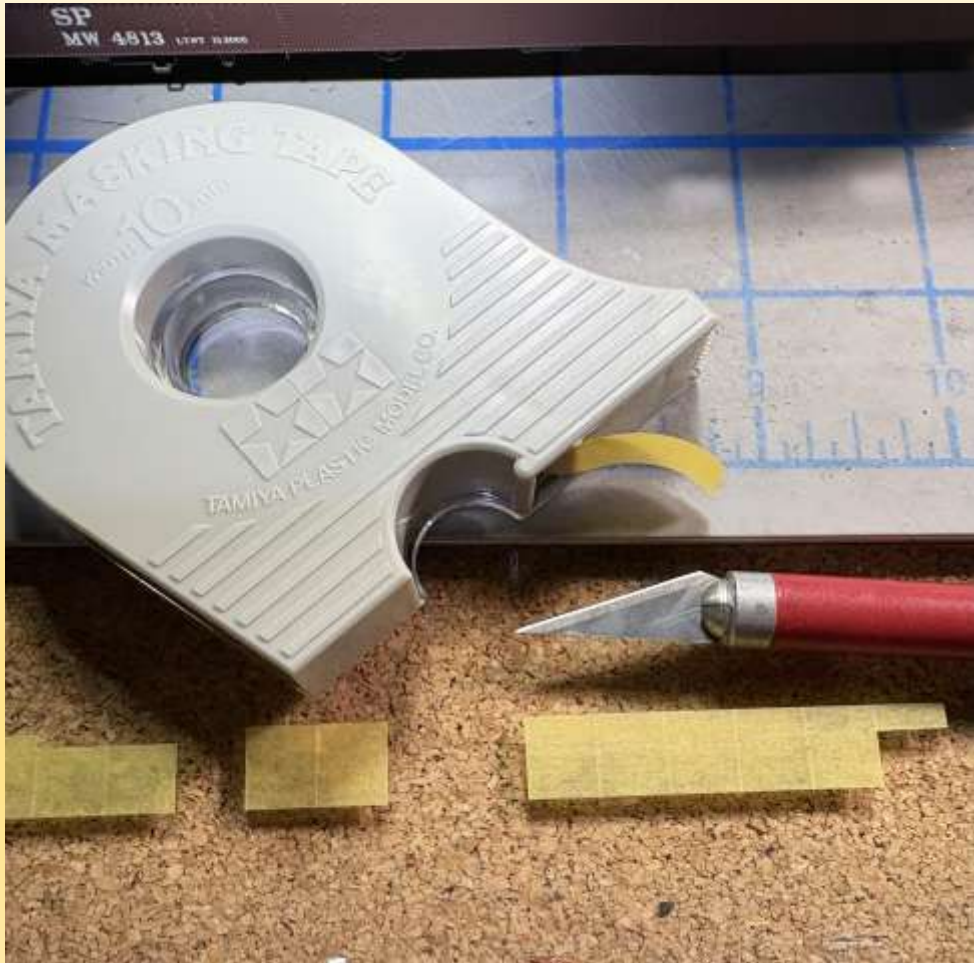
This is no 2 Micro Scope Glass and is about .008 thick.
Canopy glue was used to attach in place.



The interior was glued in place after the glass dried



Window shades were made by using
Tamiya Masking tape cut to proper size as seen below
and put in place with tweezers.



Finished Interior



Owl Mountain Decals applied and car weathered up a bit



Finished Car



Tony Thompson has a nice article on these car on his blog [modeling the SP: Small project: an SP Boarding Bunk car](#)

Westerfeld 1901 MURPHY 40' SS AUTO CAR MOPAC

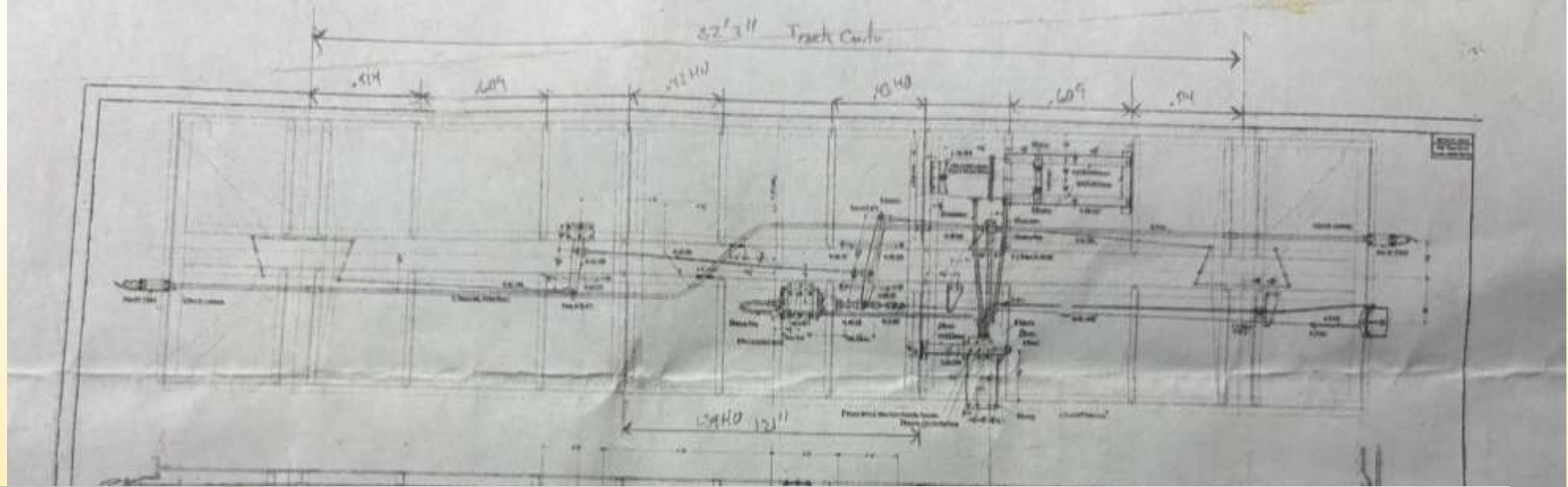
Bob's Photo?
provided by
friend and
Westerfield Kit
that was partially
assembled with
incorrect
underframe.
Note the position
of the Brake
Cylinder in the
photo.



Here is the finished 40 ft I-GN SS Boxcar
Next let's take a look at that underframe and brake
arrangement

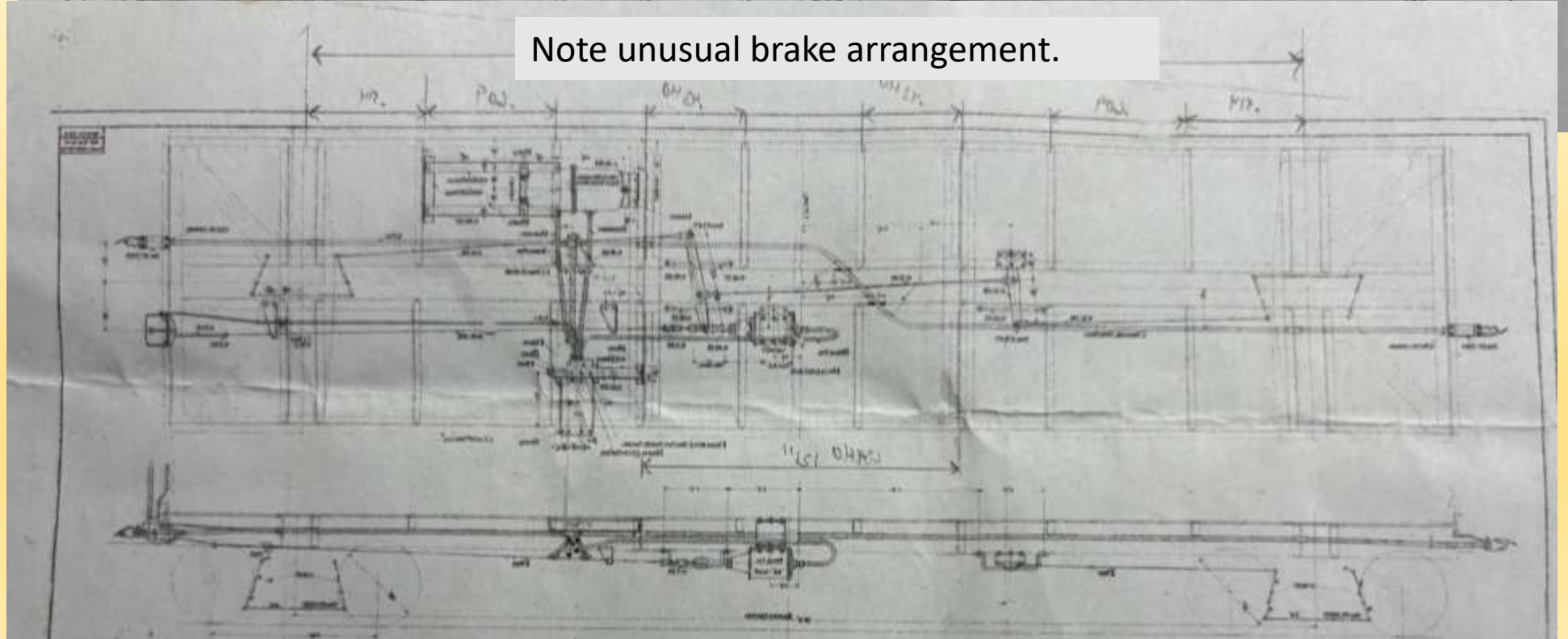


Low-res Brake
Arrangement as
seen from top
down



Note unusual brake arrangement.

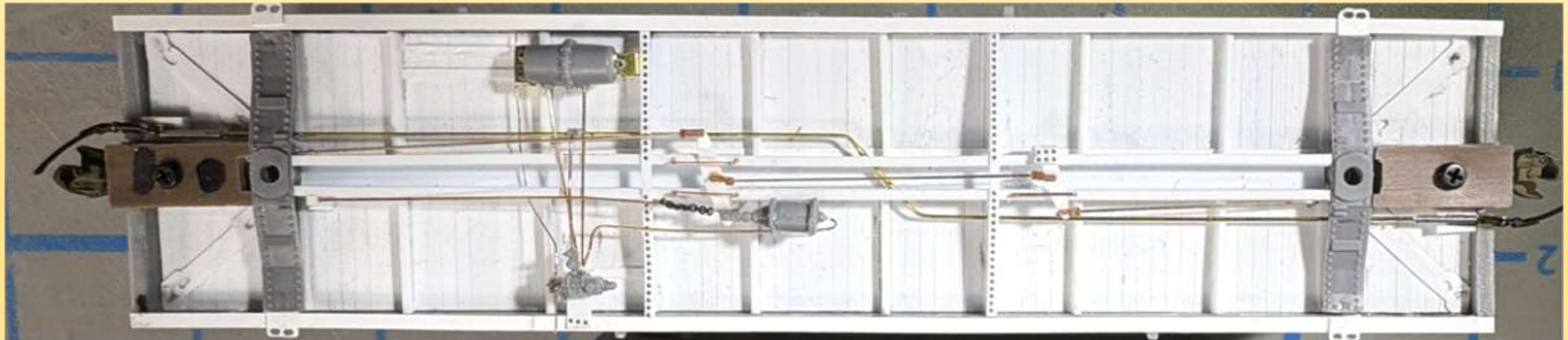
Low-res Brake
Arrangement
printed with image
flipped as looking
at car from bottom
up
Note reservoir and
control valve are
usually to the right
of brake cylinder

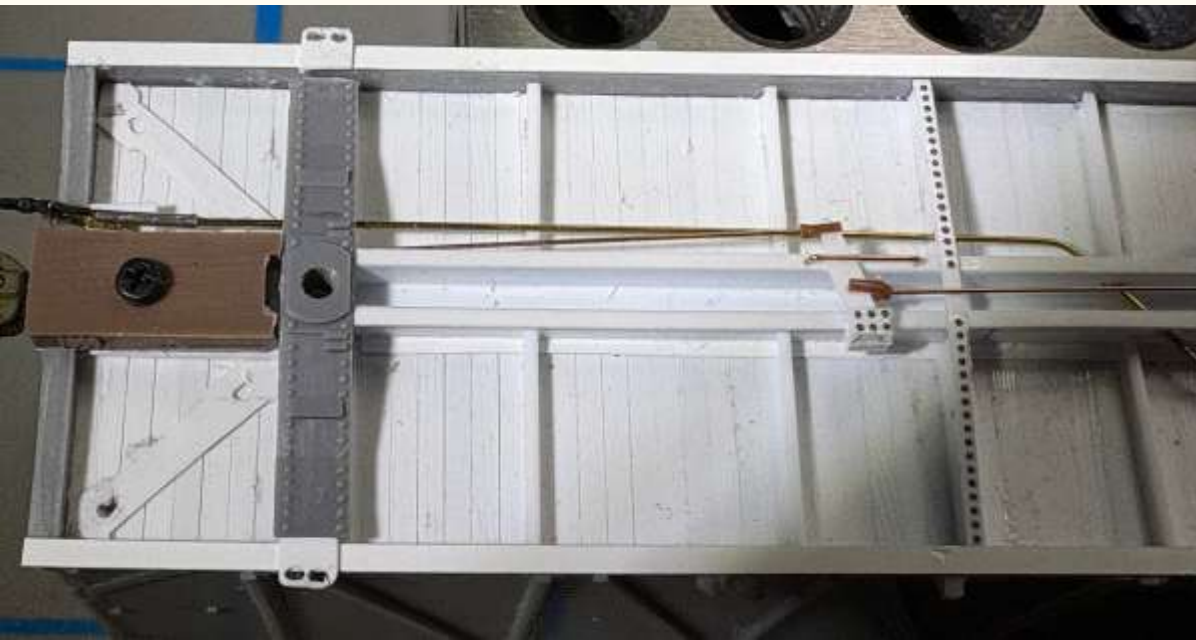


Measurements were taken from the Greneal Arrangement Brake Diagram for this car

Board by board construction using .060wide Evergreen Styrene was used as in the the construction techniques for the SWIFT Reefer.

Cross bearers and cross ties were also made from Evergreen Styrene along with Tichy Bolsters as seen below





Towing brackets were constructed from Evergreen styrene and installed by the bolsters

Smokey Mountain scale draft gear was used as well

Tichy AB brakes were installed and piped with Tichy Wire

Note the mounting supports for the right end of the Brake Reservoir as on the general arrangement drawing



Evergreen HO 2x6's were used for the Running Boards



Note the addition of a .005 thick strip glued to the bottom of the side sill that creates the flange sticking out a bit as on the prototype

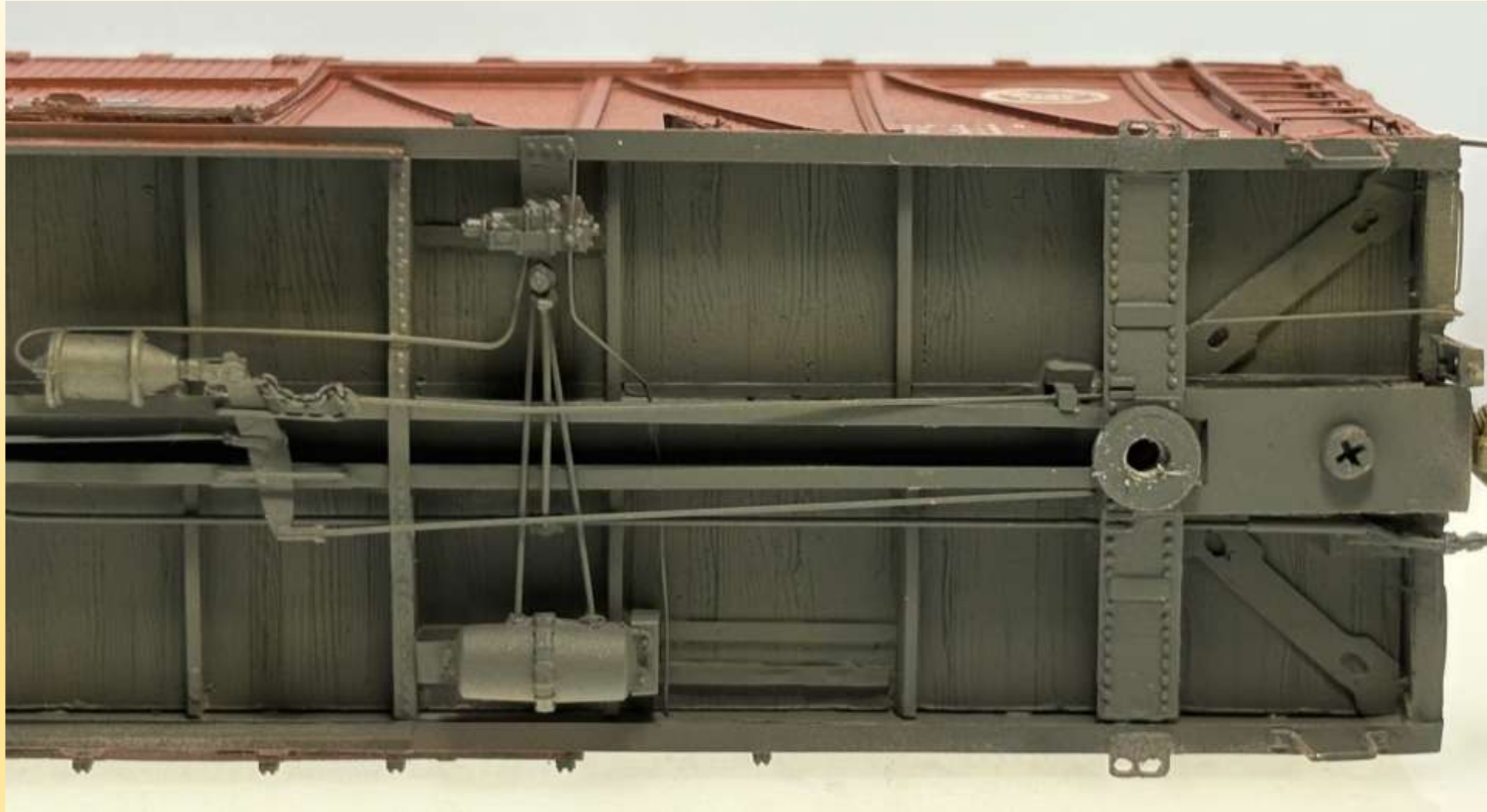
B-End showing the PE
Yarmouth ladders with .008
wire rungs soldered in
place, Tichy brake step and
other
Details

Below detail of Lateral



Closeup of the underframe detail

Note effect of
individual boards



Closeup of the underframe detail



Closeup of roof and b-end detail



The finished car with a bit of weathering
Paint was Vallejo
Decals custom made by Gerry Glow



SnT 2025 FGE Reefer Cocoa Beach Meet



Full construction presentation available at
shake-n-take@groups.io | [Home](#)
Files section 2025 Shake-N-Take FGEX 1921 Reefer

The parts from
the 2025 Shake
and Take

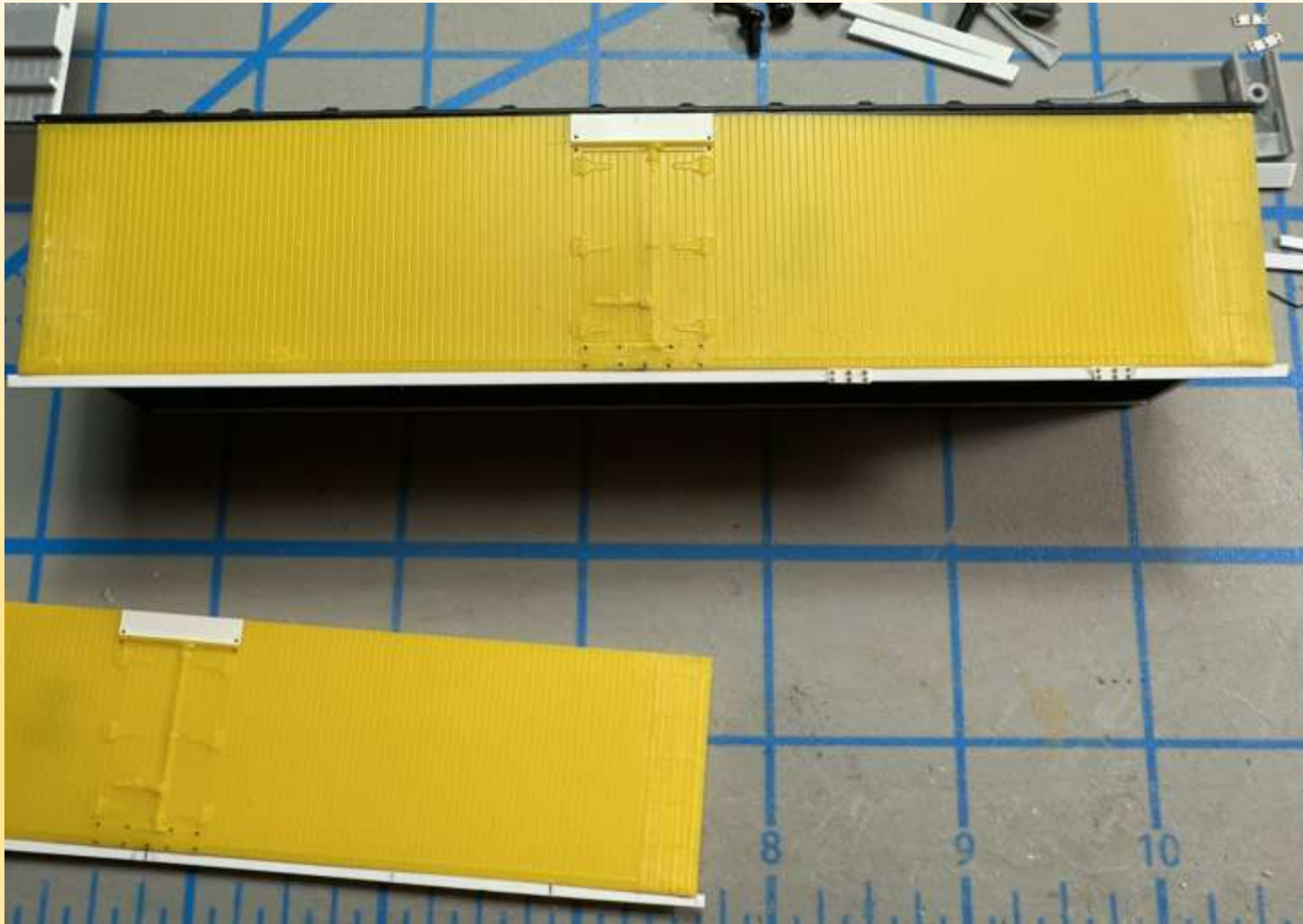


Photo at right is from a Bill Welch presentation . This is the car I modeled with 6 inch sill



Experience apparently revealed that the four-inch side sill was not sufficient and consequently a six-inch member was applied. While most of the hardware appears to be the body color, the hinges, door latching hardware, and the fittings told hold the doors open are black. Postwar improvements made to the consortium's fleet included steel sheathing in the kickboard area under the doors and the area above the door flashing. This car was found in Palmetto, Florida on March 1, 1953.

Photos showing the addition of the 6 inch sill I made from Styrene and rivets and substituted for the resin part.



The underframe
ready for Brake
too be added



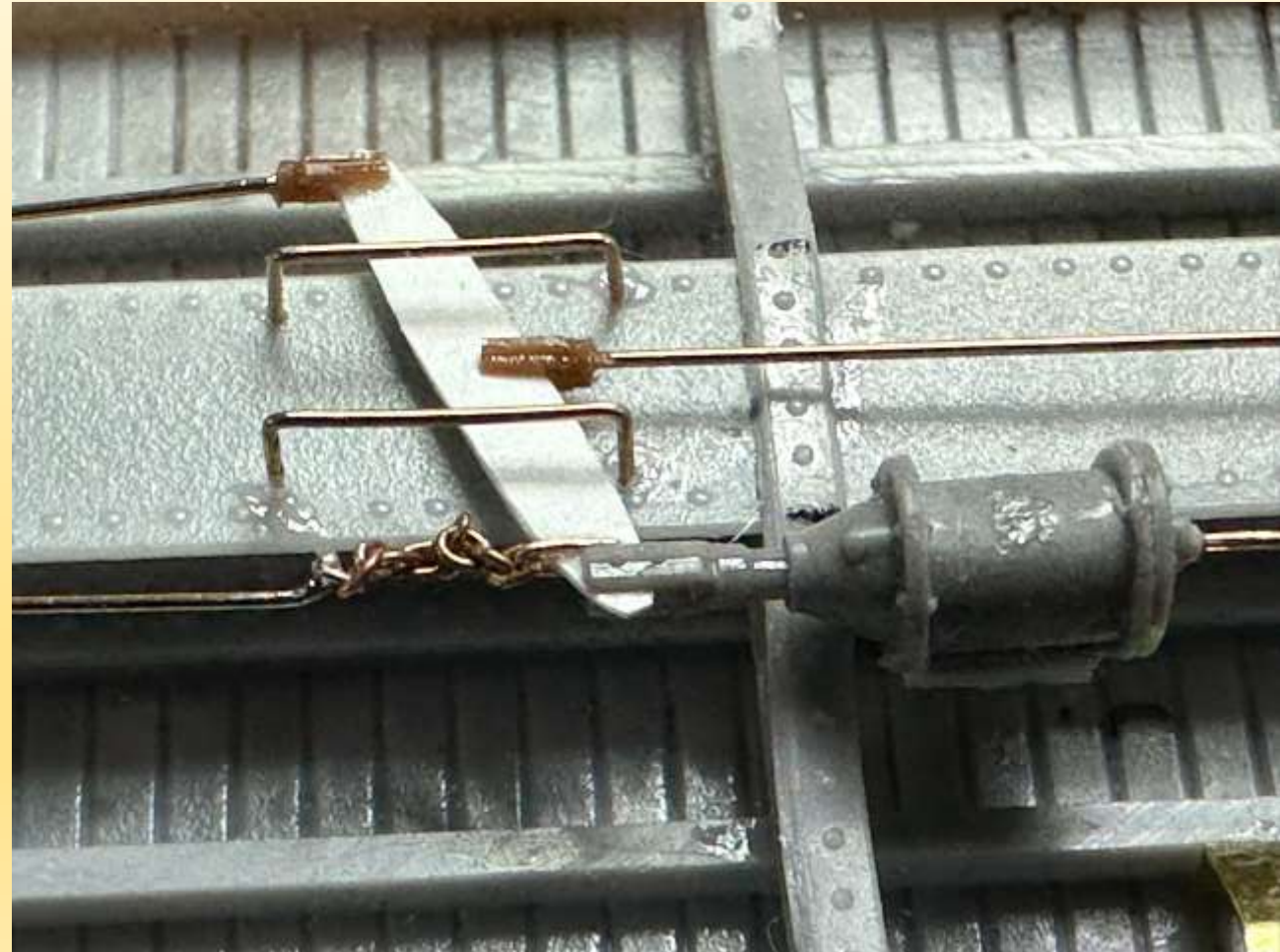
The air line
shows on the
top photo and
the AB brake
layout on the
bottom



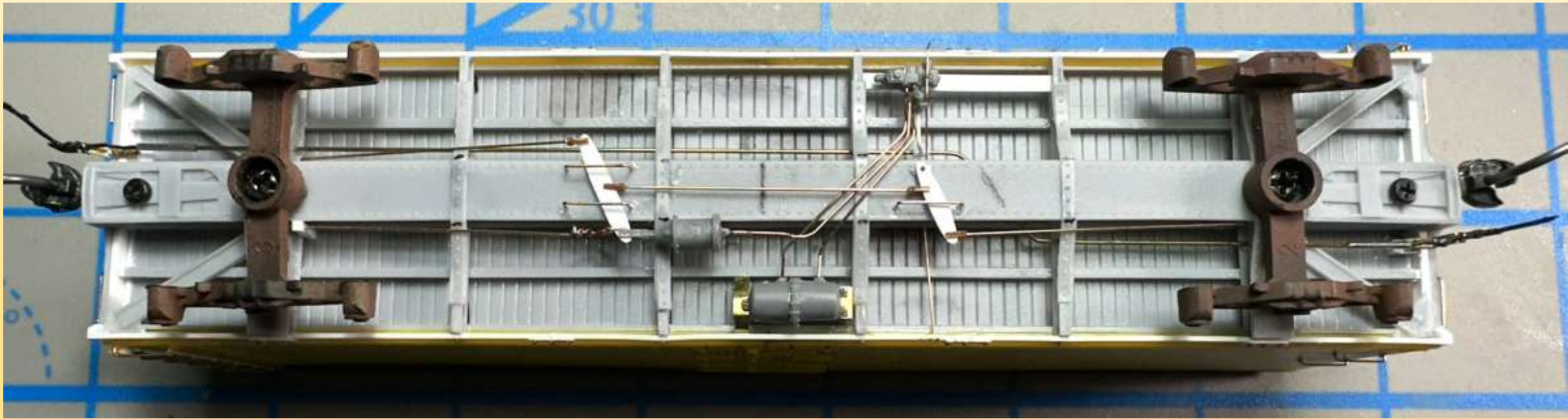
This is the method I use to attach the chain to the brake cylinder and clevis on my models. I solder the rod to the end link of the chain. I formed a U shape from .008 wire and insert in the other end of chain as shown.

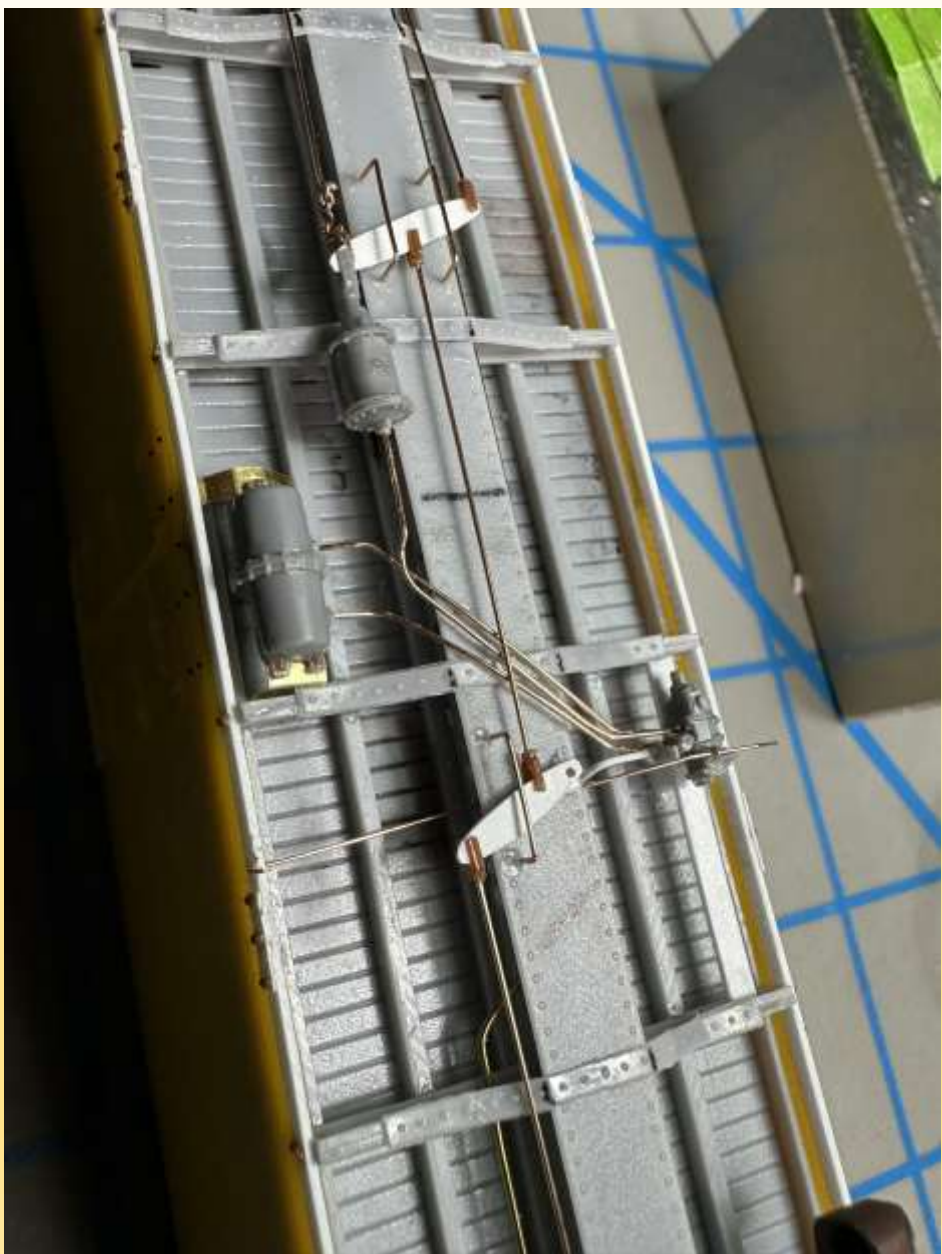


Below you can see that the U shaped .008 is put to the inside of the Brake Cylinder Rod and clevises and glued in place.



The finished underframe shown below





I bend all my grabs using a digital caliper and used these along with Yarmouth Models 18" 7 rung ladder stiles

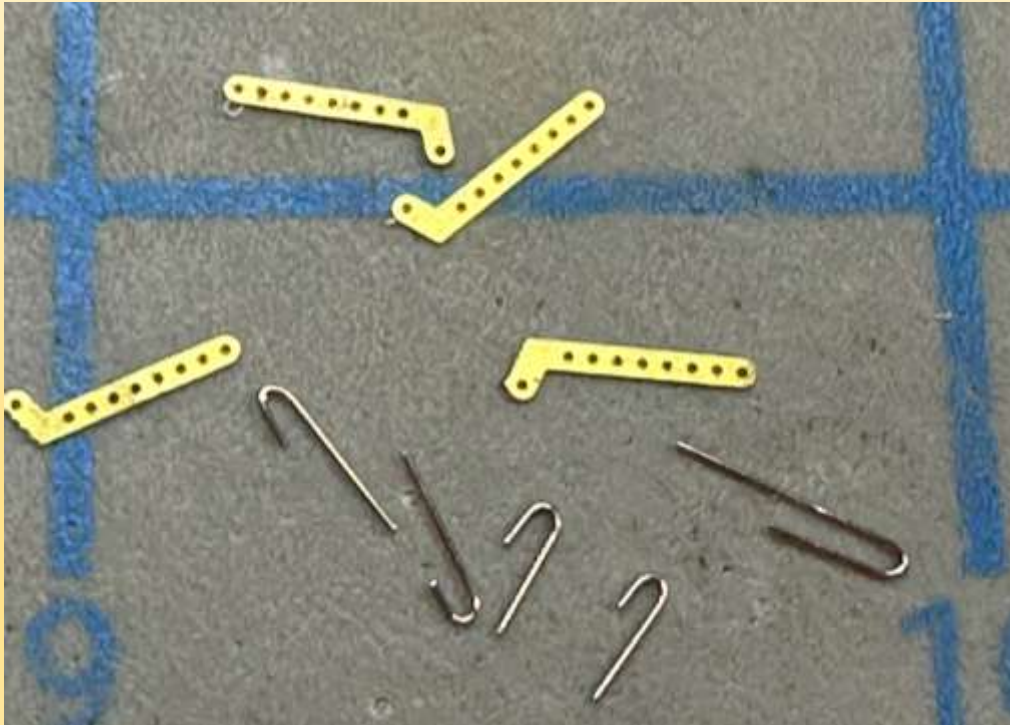
A Yarmouth laser cut assembly jig was used to assemble. The laser cut wood one is a good one to use if you solder your rungs. I often solder a top and bottom rung and glue the rest. When using .008 wire, I usually soldered all in place.



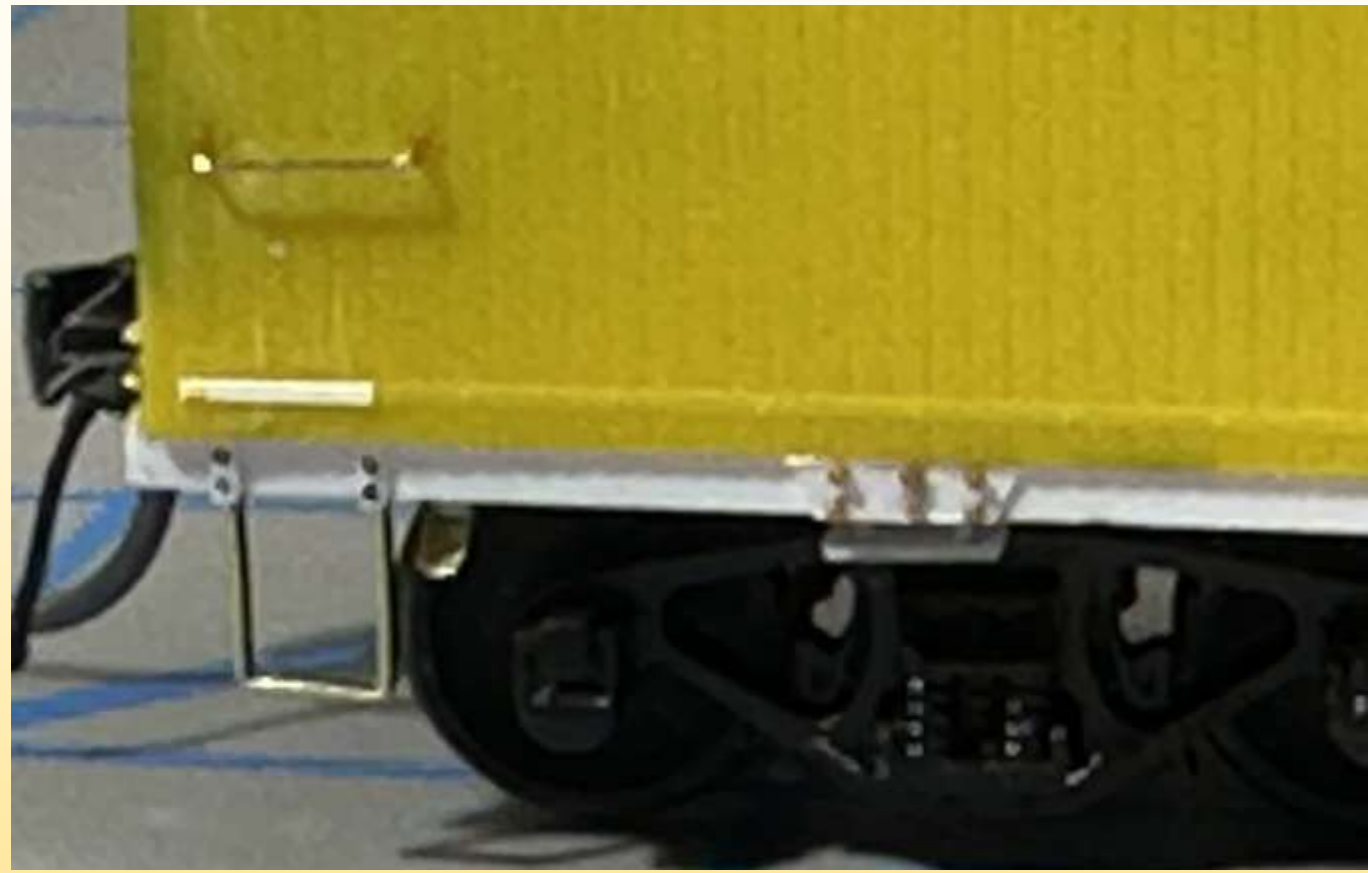
Tichy .020 rivet
heads were cut
off and glued
above each grab
iron hole.



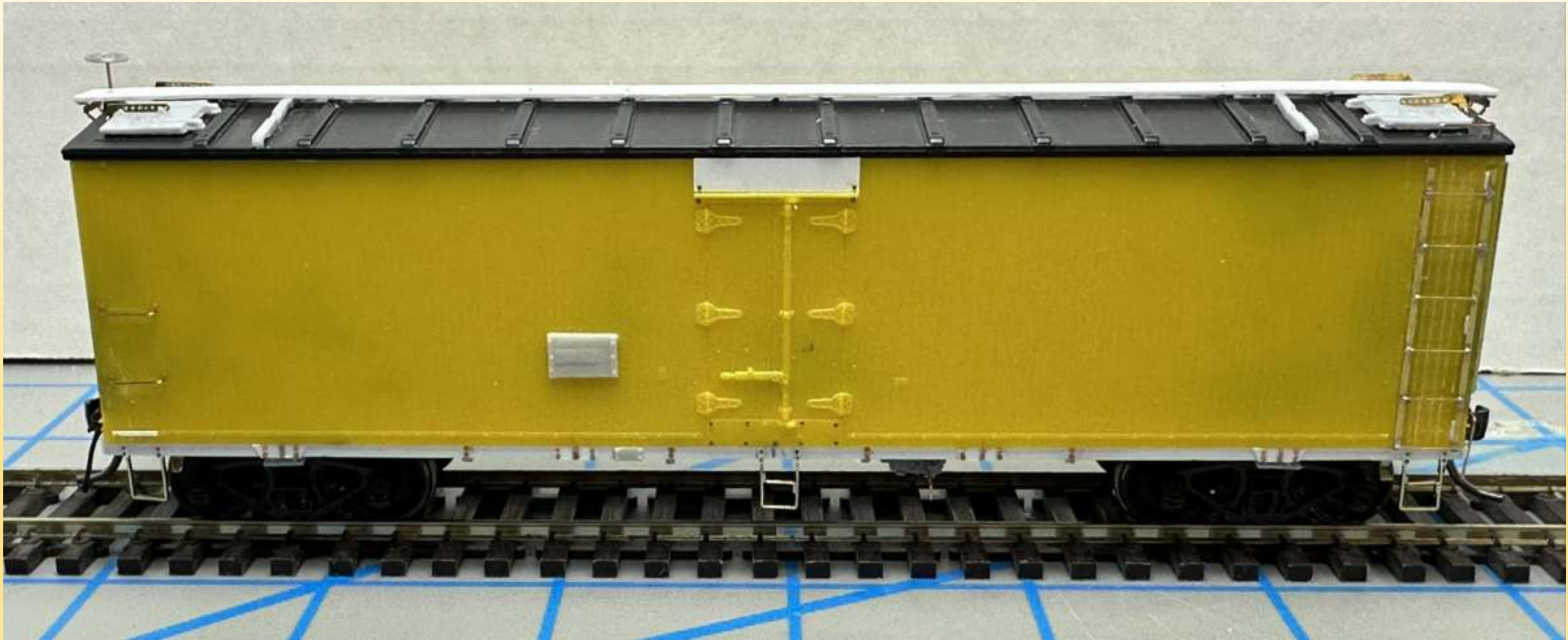
Yarmouth Models Ice Hatch
Latches were installed using the
u shaped .008 wire loops.



Making the drains from .004 brass formed into a C shape and styrene supports cut as shown. The styrene glued to underframe and brass glued to styrene to get the proper angle.



The car ready for paint



Detail photo of B-End and A-End.



The car was primed with Stynylrez from Badger. Painted reefer yellow with Vallejo 71.078 and Vallejo Rd Brown oof and ends.



B-End detail photo



Ice
Hatch
details



Full instructions for my version of the 2025 FGE car may be found on the shake-n-take groups.io in the files section

[2025 FGE S-n-T George Version.pdf](#)

2025 Naperville RPM Gift Kit Finished ready for weathering



Full instructions are posted on the RCW web site at link below
[Resin Car Works](#)

The rungs were carved off and I used a Yarmouth ladder stile with 15 3/8 spacing as a drilling templet for even spacing of rungs



My carving tools

#1 X-acto # 19 blade

#2 Micro Mark Handle and
micro scaple blade

#3 Micro Mark Seam Scraper
(pull type)

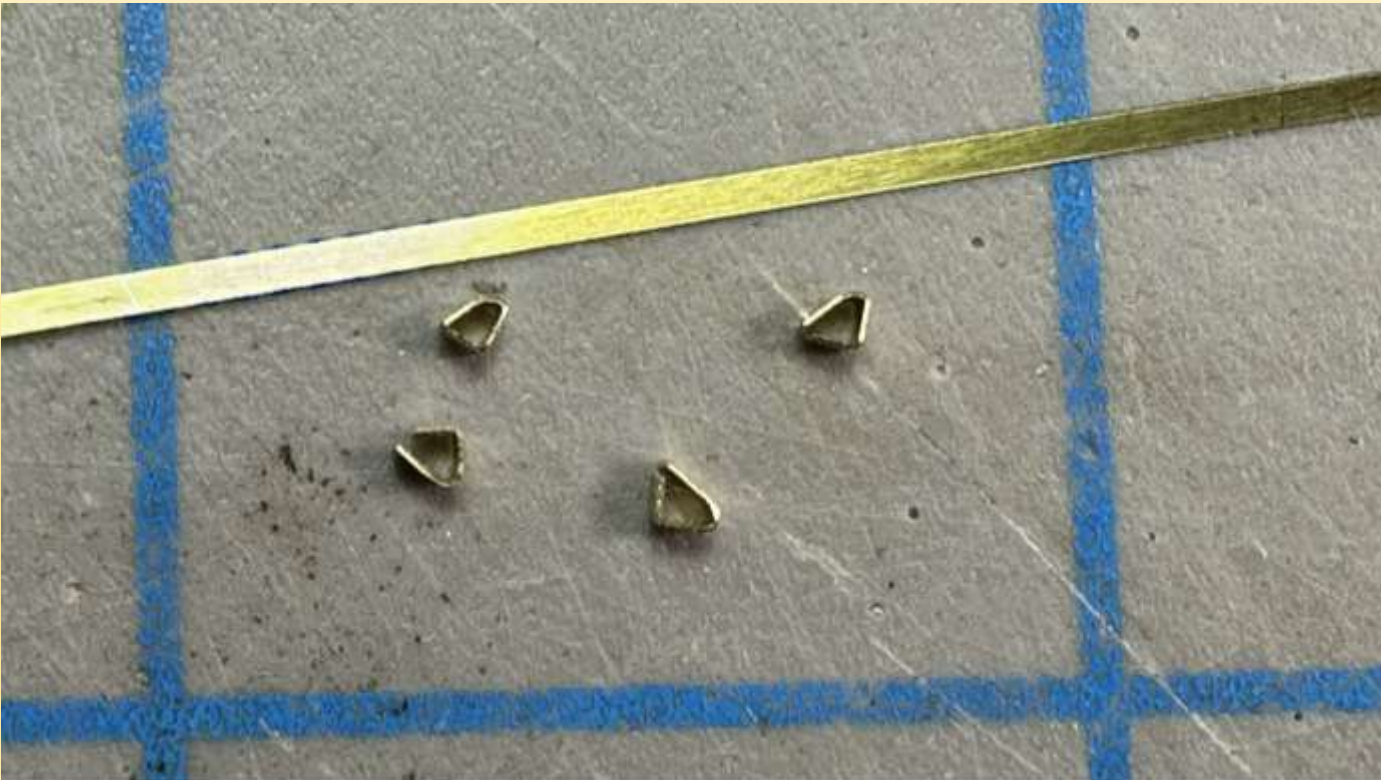
#4 Mission-Models Micro
Chisel

#5 Monument Hobbies Seam
Scraper (double
ended/angled pull-type)



Below .004 brass was used to form the upper door stops

To the right, Evergreen Styrene was used to make the lower door stops



This photo shows the upper left and lower left door stops in place.

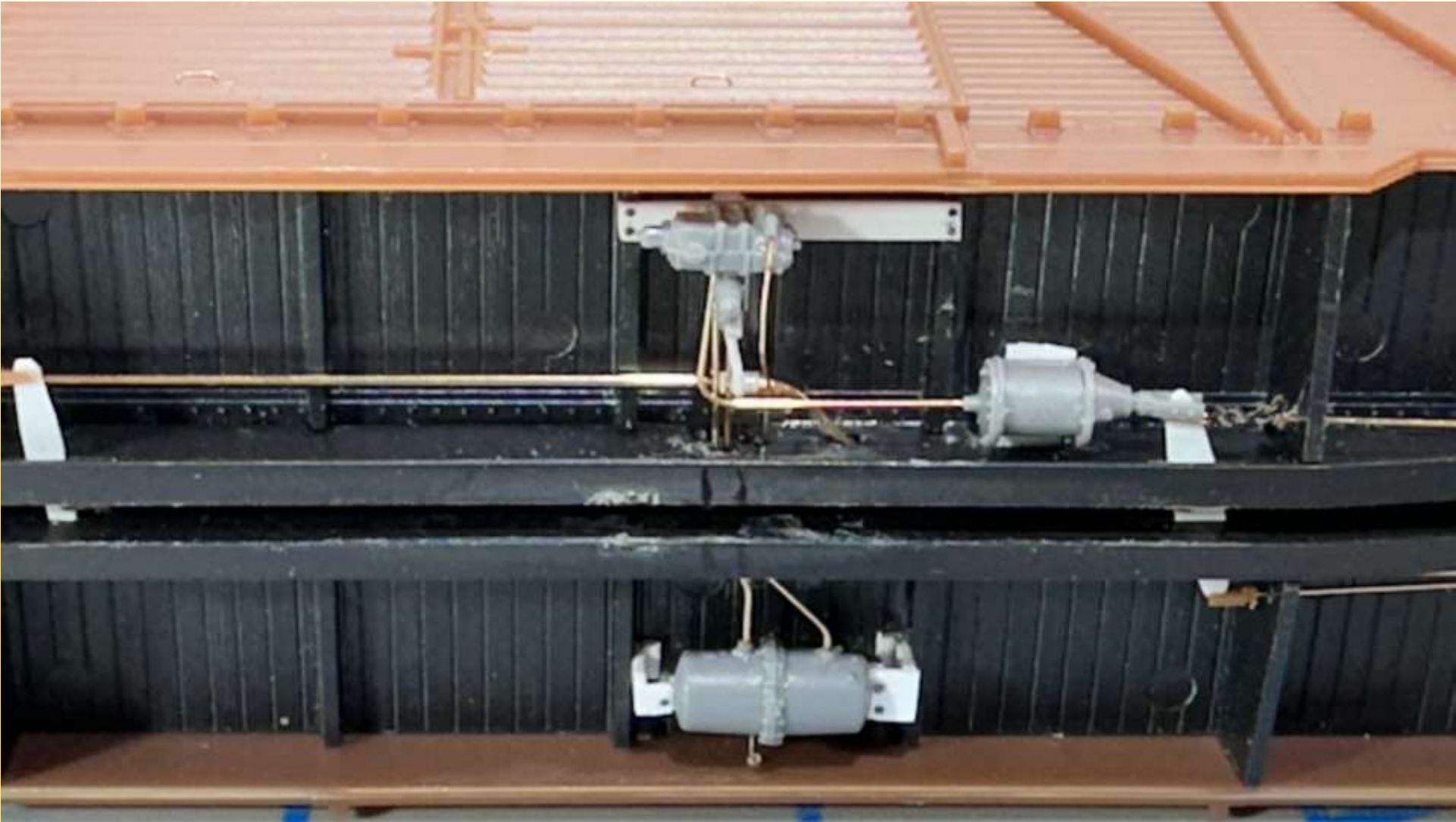
Above the door are small bits of styrene glued in place to better model the actual door.



B end detail



The Brake arrangement I used for this car



The car was primed with Badger Stynylrez gray



The underframe was sprayed black with Vallejo Model Air and the rest of the car was sprayed Rotbraun RAL8012 from Mig Ammo.



The car was given a gloss coat of Holloway House Quick Shine floor finish and the decals applied



A detailed model of a brown Frisco SL-SF boxcar, number 152805. The car features a corrugated metal body with diagonal bracing. On the left side, the Frisco logo is visible above the text 'SL-SF' and '152805'. Below this, technical specifications are listed: 'CAPY 100000', 'LD LMT 108300', and 'LT WT 69700'. The car is marked with 'SP-B-54' and '9/15'. The right side of the car displays 'AU T OMO B ILE' in large letters. Below this, a table of specifications is visible:

INT'L	WHLR
ADDRS	DRGR
PRFT 10-6	
EXW 10-6	H 12-8
EW 8-11	H 14-8
EL 80-6	
EW 8-11	
EW 10-8	
CH PE 6-10	

 The car is marked with 'SLT-B-38' and '1101'. The model is shown on a light green surface against a white background.

The End



Models are on display in the display room