



Kitbashing FGEX Rebuilt Reefers

2025 Naperville RPM Meet

October 16-17, 2025

Fenton Wells



This clinic I will show how to kitbash two of the early steel sheathed reefer re-builds that the FGEX did in the late 1930's and early 1940's. Bill Welch shared the photos with me, and I felt they are truly unique, even though not done in large numbers.



Kitbashing Early FGEX Rebuilt Reefers

- 3 Phases of rebuilds from the early 1930's through the 1940's
- Steel reefers with riveted sides
- The FGEX Gospel according to the Late Bill Welch

FGEX CONSORTIUM REBUILT CARS

	1932- 1940	1946- 1957	Total
FGE Rebuilt Cars	240	270	510
WFE Rebuilt Cars	0	550	550
BRE Rebuilt Cars	0	0	0
NX Rebuilt Cars	0	80	80
	240	900	1140

Kitbashing FGEX Rebuilt Reefers

- Phase 1 started in the early 1930's
- Built on PRR R-7 underframes
- Car numbers 52680-52779





FGEX Phase II Rebuilds – 50 cars in 1937

Kitbashing FGEX Phase II Rebuilt Reefers

Phase 2 - Car numbers 10850-10999

5-5-5 Murphy ends, Fishbelly underframes and Andrews trucks

FGEX style Hutchins roof

Appears to be rebuilt from a USRA 40-ton boxcar

Rebuilt in 1937 by ?

Riveted sides with straight side sills

Cap - 75,000 Lbs.

Doors 4 ft wide

Door height 6'-6"

Phase II Rebuild: Model

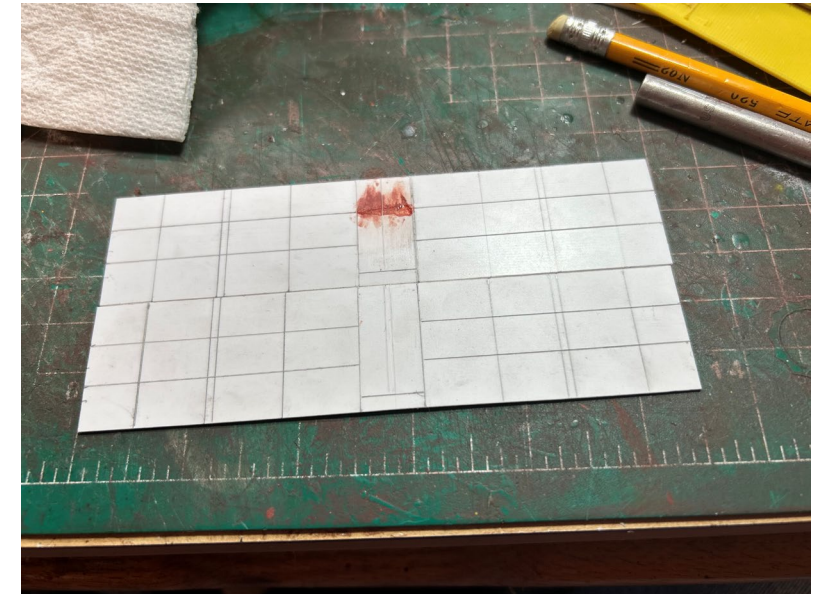
- Accurail 4800 wood reefer kit to start
- Westerfield ends (or Tichy)
- Scratch built sides with archer rivets
- Grandt Line reefer door hinges and hardware
- National Scale car decals and tack boards
- Accurail Andrews trucks
- Intermountain Wheelsets
- Kadee couplers and bracket grabirns
- Plano Ice hatch levers
- Tangent Air hoses





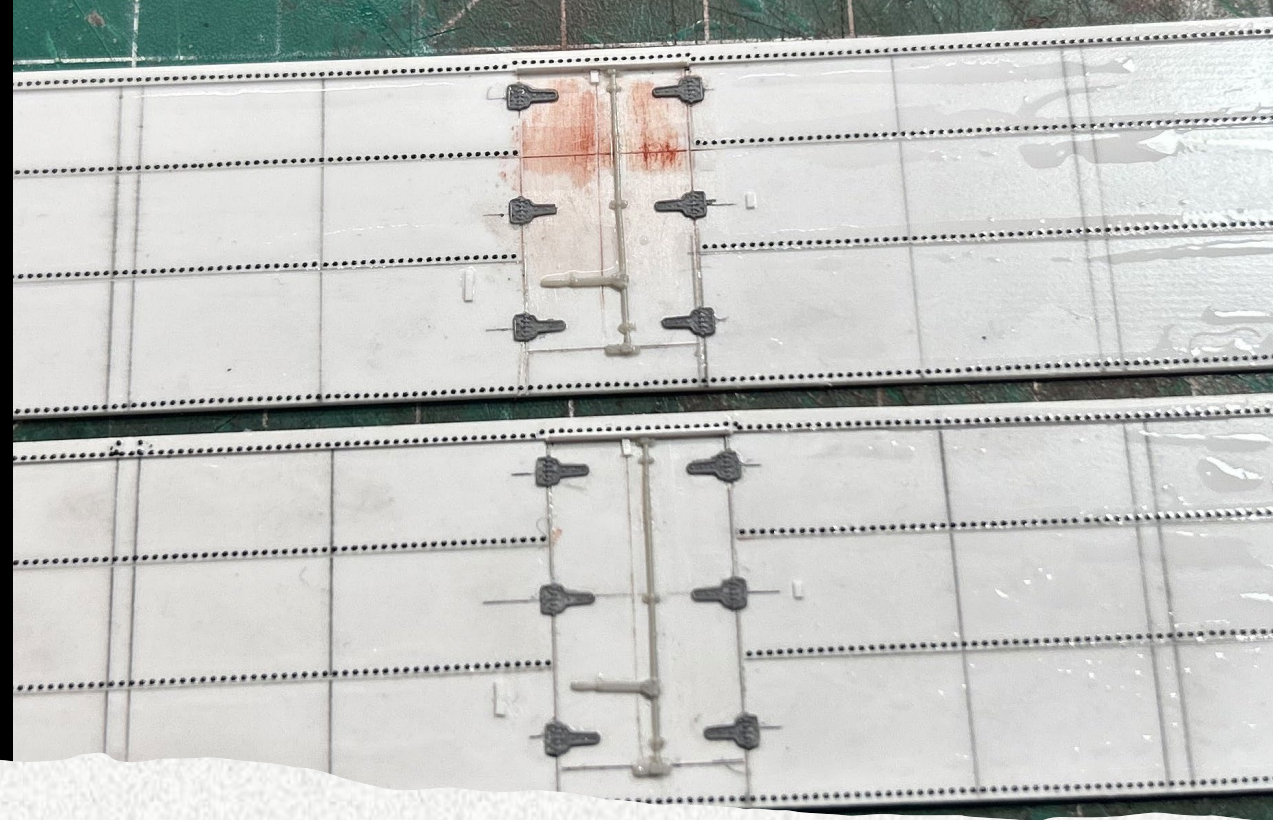
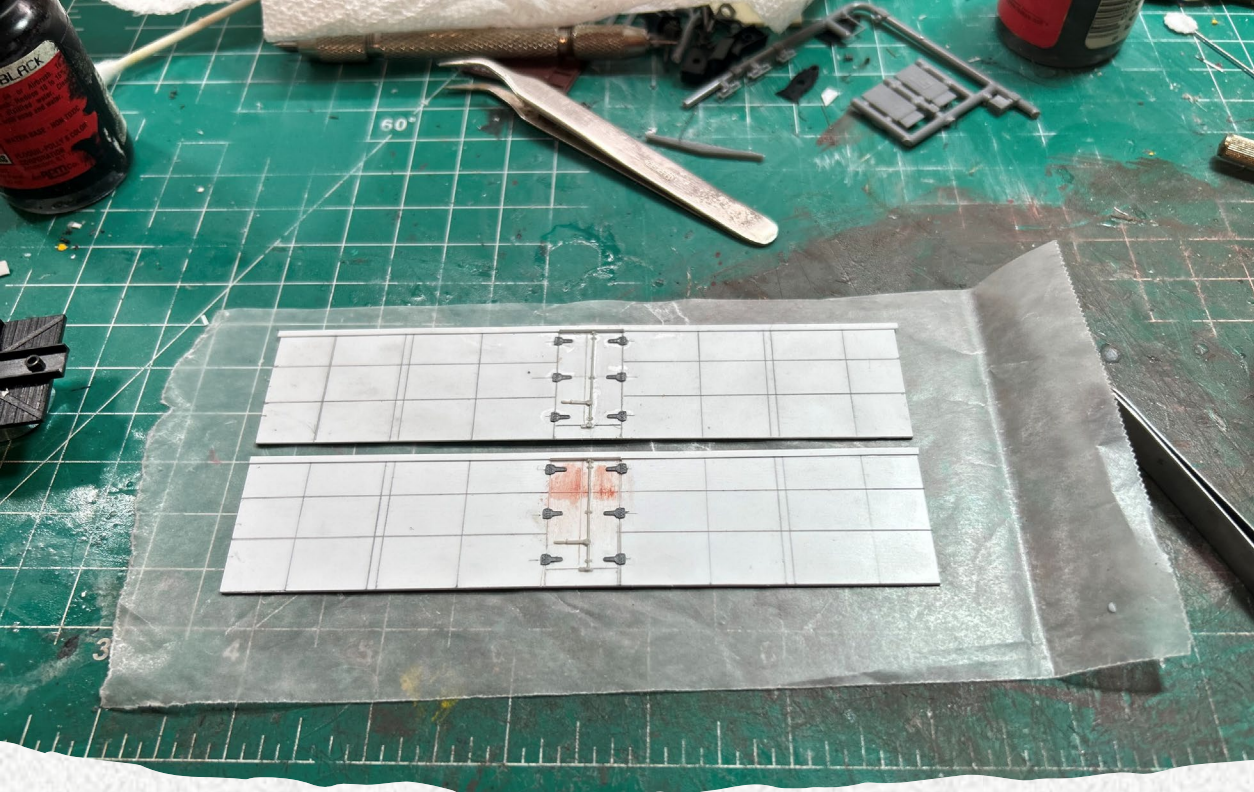
Remove the Accurail ends and
install the Westerfield ends

Cut the sides from Evergreen .030 sheet and layout the panel lines, I used a pencil

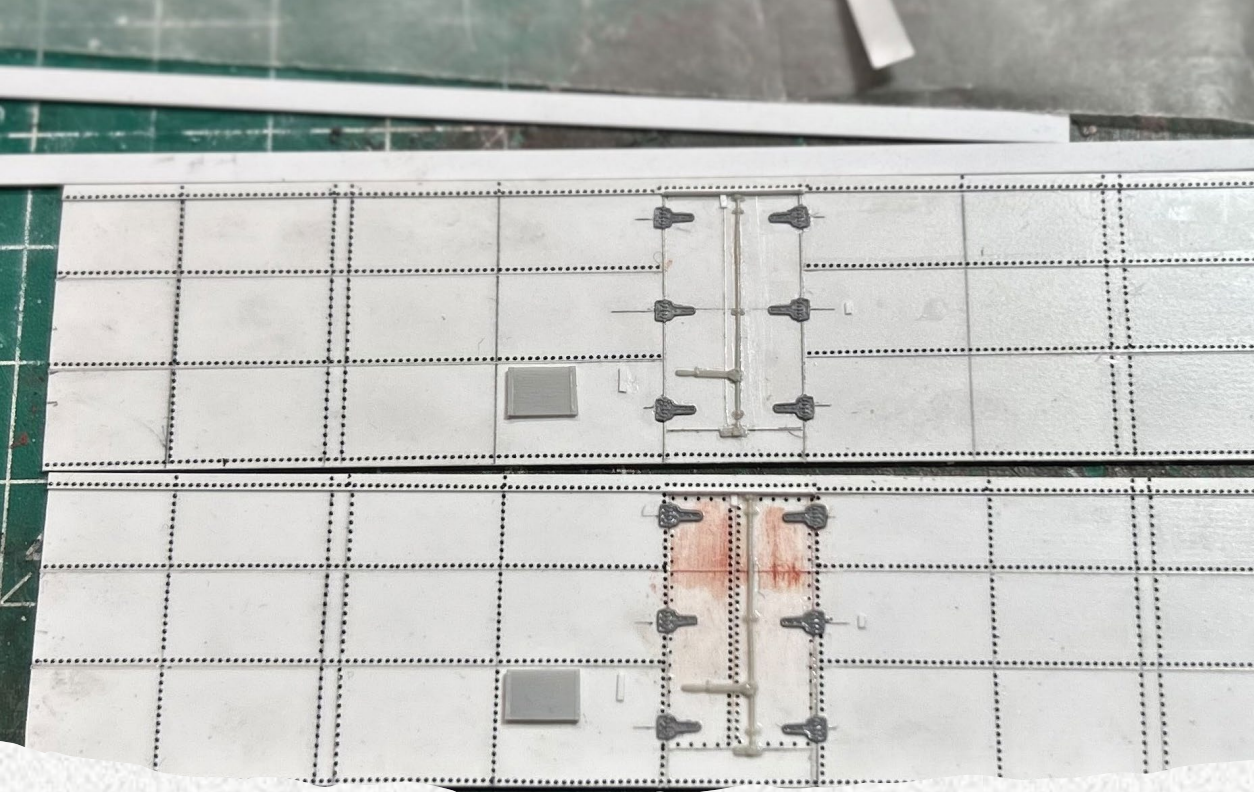


Scribe the panel lines and the door outline and add facia strips along the top of the car side (.010 by .060 styrene)



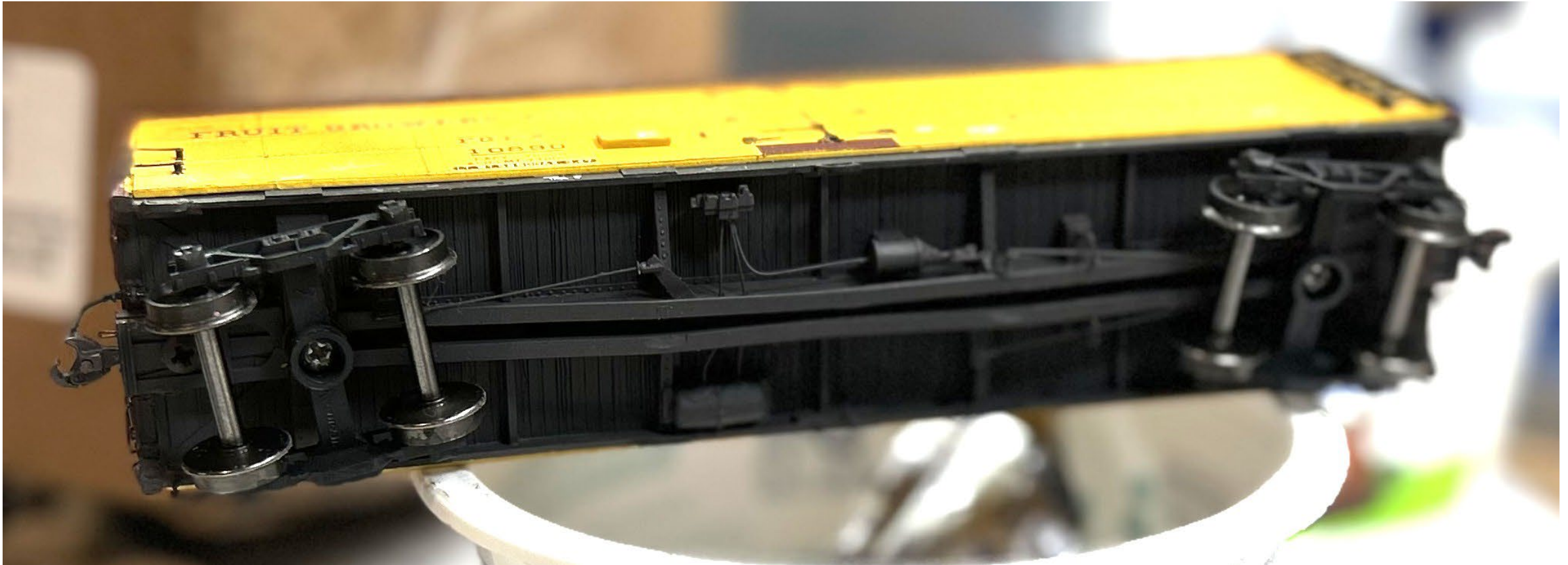


Add door hardware, drip ledge
over the door, door details
and begin the riveting process



Rivets finished and tack
boards added, then paint

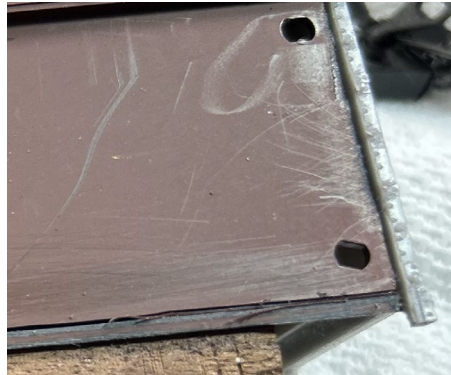
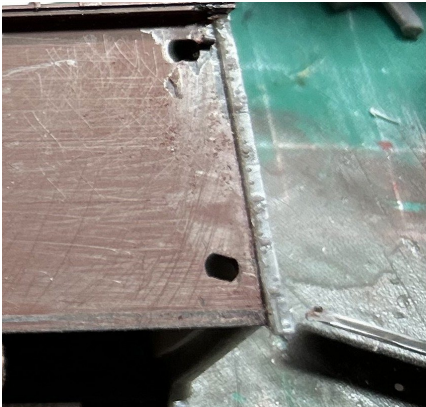
Finish the underbody and brake rigging, now the underbody can be installed to the car body

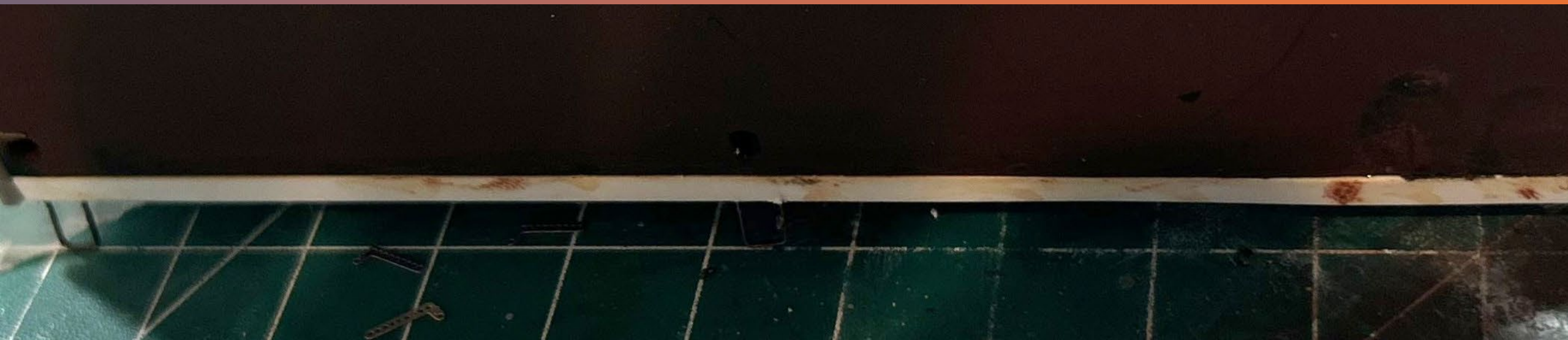


Straight 8" Side Sills

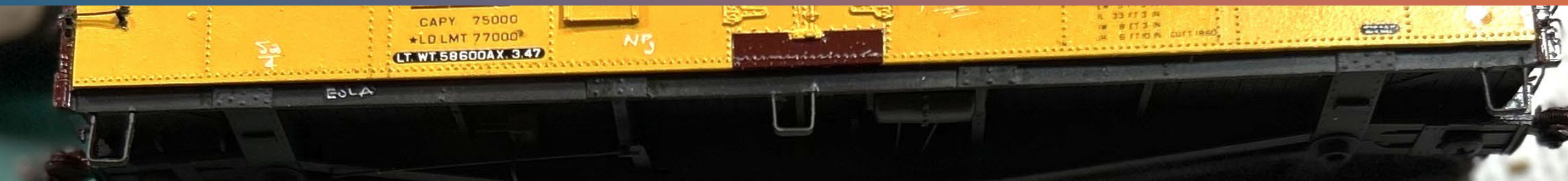
No exposed cross
members

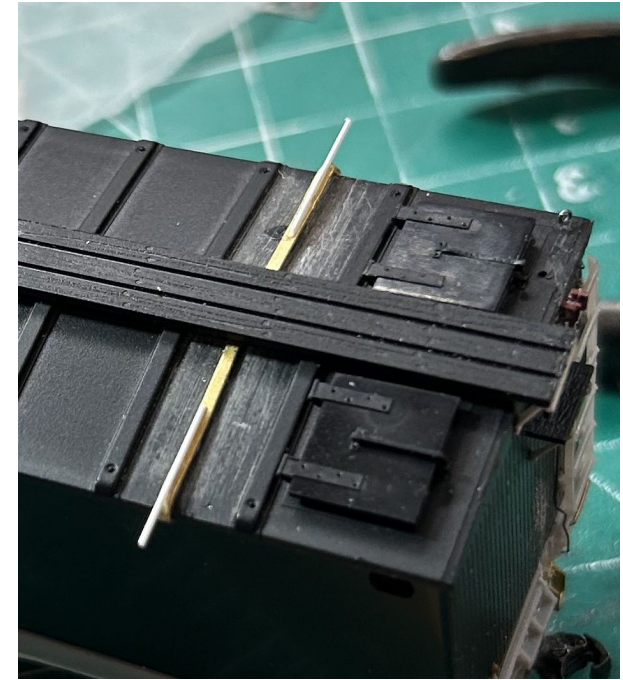
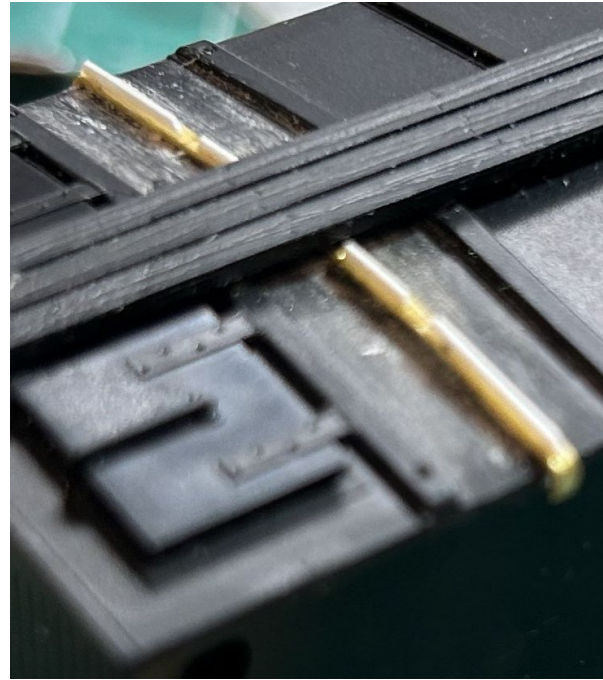
Draw, then scribe a line and cut
side sill to ready car for new side
sill





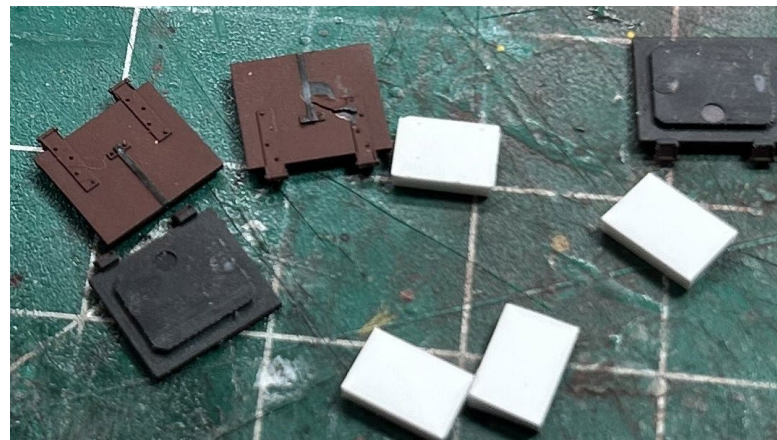
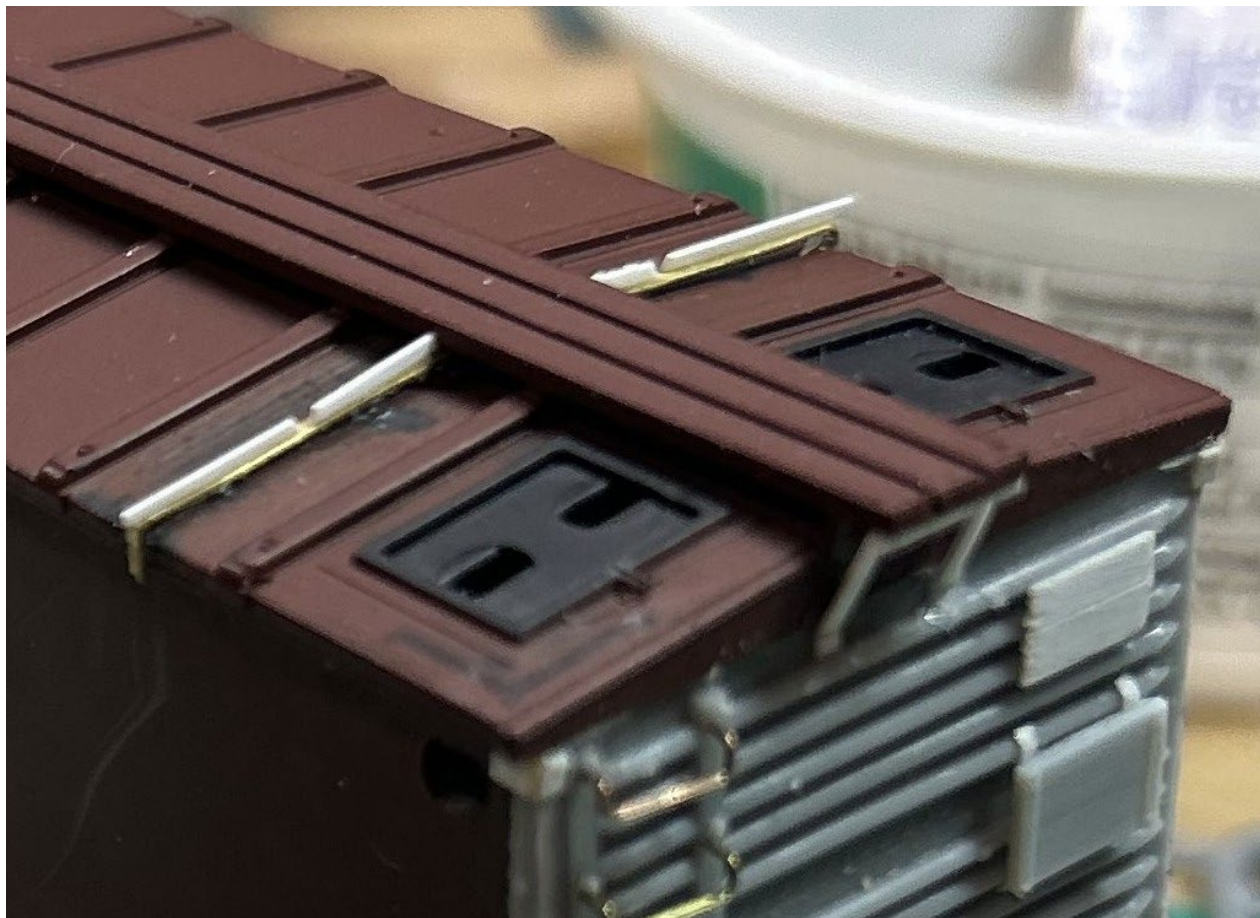
- + • Next install the car floor so that you have a surface to attach the new side sills to. Side Sills – Evergreen .030 by .125, and the side sills sit in from the car sides. Finally add plates (.010 by .080 Styrene) and rivets to the side sill to indicate a steel framed car.





Add grab irons, Roof walk supports, roof hatch rests and side sill steps, cut levers and underframe and now the side sills can be installed and glued into place

Roof, hatch rests, hatches... open or closed?



Open, this time with
Plano latches

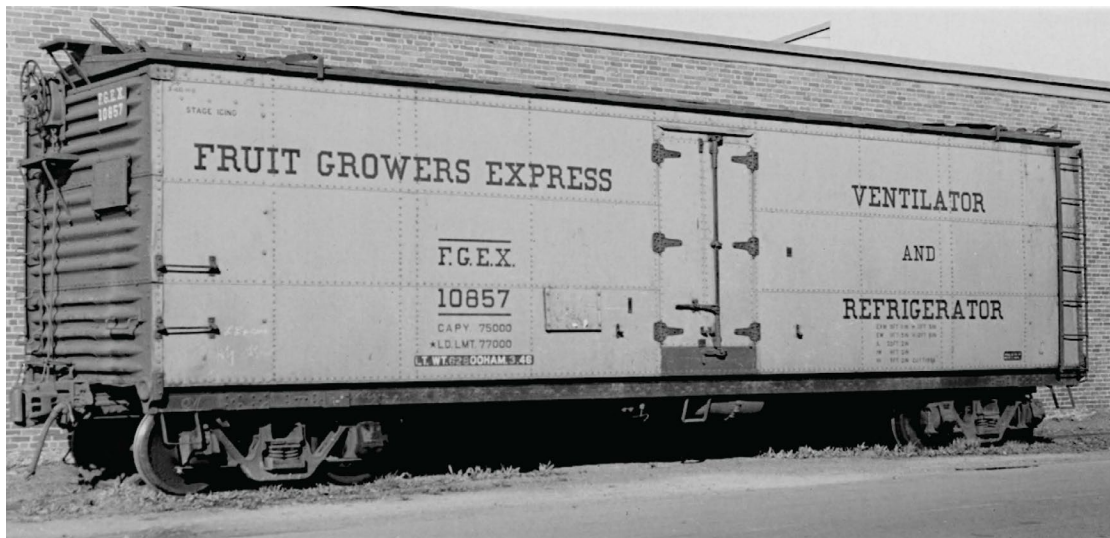


Decal and paint, and weather



Decal and White pencil chalk marks

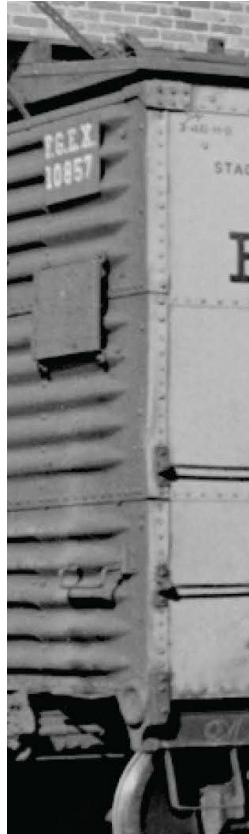




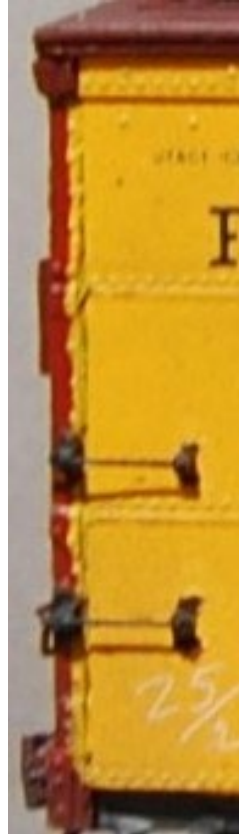
I tried to come as close to the prototype as I was able



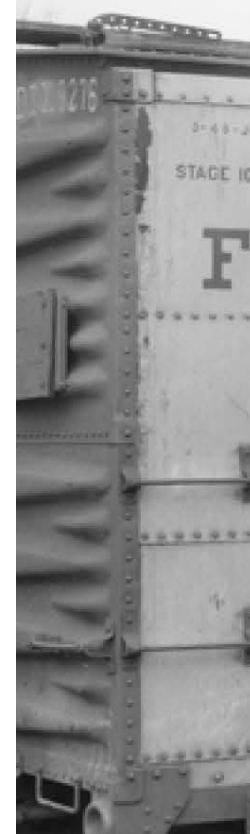
I found something I missed as I was finishing up the model. FGEX painted the car ends differently for square ends versus 'w' ends. I found that my hand painted capabilities aren't very good. But I had to try



Prototype
Square end



Model
square
end



Prototype
'W' end

-
- And Now for Something..... Completely Different.
 - Some of these rebuilds were also done for West India Fruit and Steamship Co.
 - And as Mechanical reefers no less.....in 1957.....Who knew!



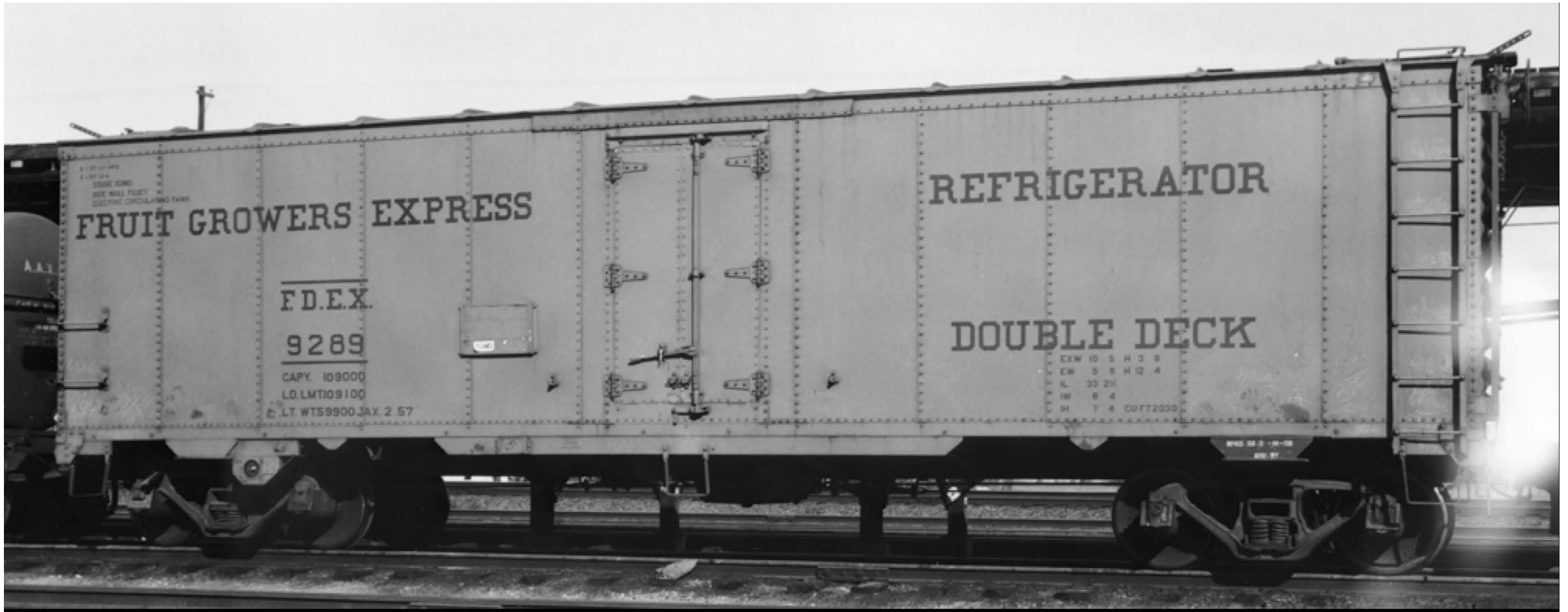


Phase 3 Rebuilds (1939-1940) Car No.'s 9250-9299
4 horizontal riveted side sheets and 4/4 SQ dreadnaught ends

FGEX steel side reefer rebuilds Phase 3

- 1939-1940, Car No's 9250-9299
- Builder Unknown (FGE Indiana Harbor Shops?)
- Double Deck cars
- Door width 4 ft. Door height 6'-6"
- Capy 90,000 Lbs.
- Tabbed side sills
- 4-4 Dreadnaught, Square corner ends
- SRE rectangular Murphy panel roof
- Tabbed side sills
- 2 Versions horizontal and vertical side sheets

Phase 3 Rebuilds Car No.'s 9250-9299
But some had 10 panel with vertical rivet rows –
based on the 1932 boxcar design



Phase III Rebuilds: Model

Starting point –IM PFE reefer w/ Ret. Panel roof (FGEX Version)

Details West 4/4 Dreadnaught ends, Square corners

Scratch built sides form Evergreen styrene

Grandt Line hinges and door hardware

National Scale Car tack boards and decals

Intermountain wheelsets

Kadee Couplers and bracket grabs

HiTech air hoses and brackets

Plano Hatch levers



Starting point: a partially built kit I bought off eBay

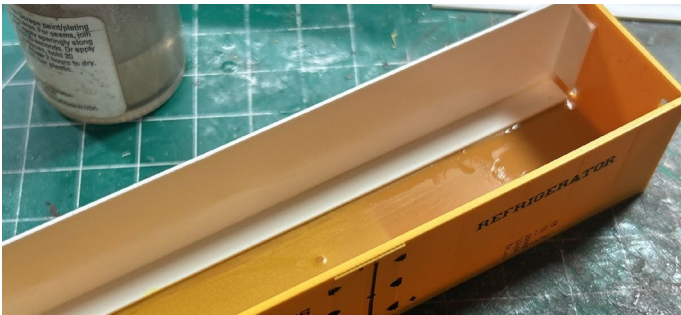
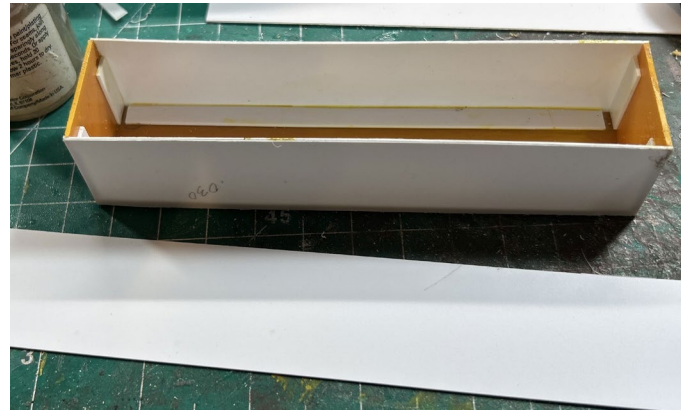
I wanted to get it back to a kit stage.



Original plan was to use the original sides and sand them down.

But I decided no, it might be easier to build new sides

Next time I may sand, Jus' Say'in

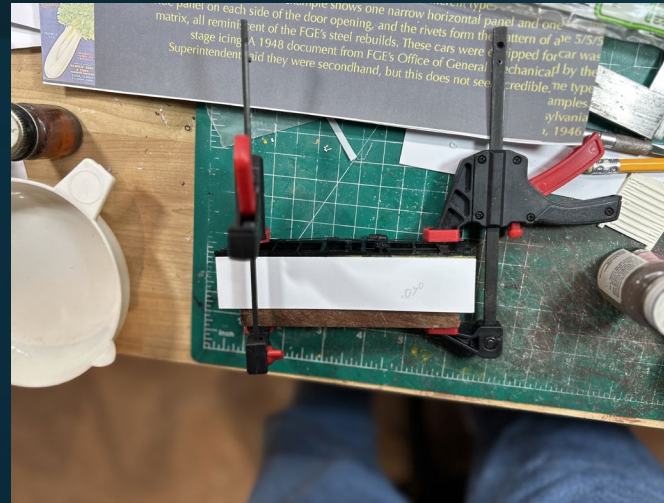


Removing the sides

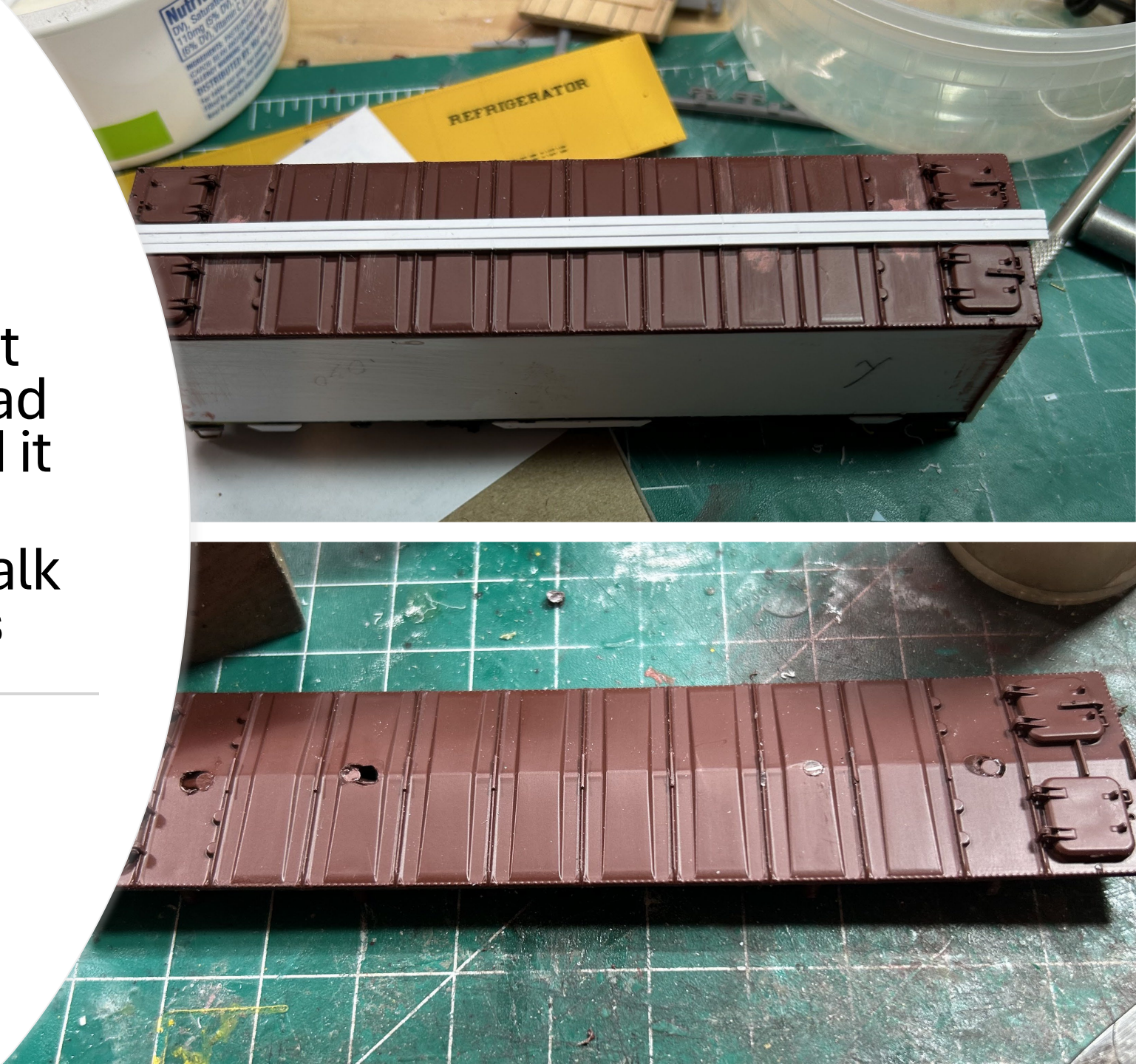
Two sides are needed to replace. An inner .030 and an outer side at .020

Next - I added the inner sides. This gave me something to glue to and to match the ends.

Then the car ends were added

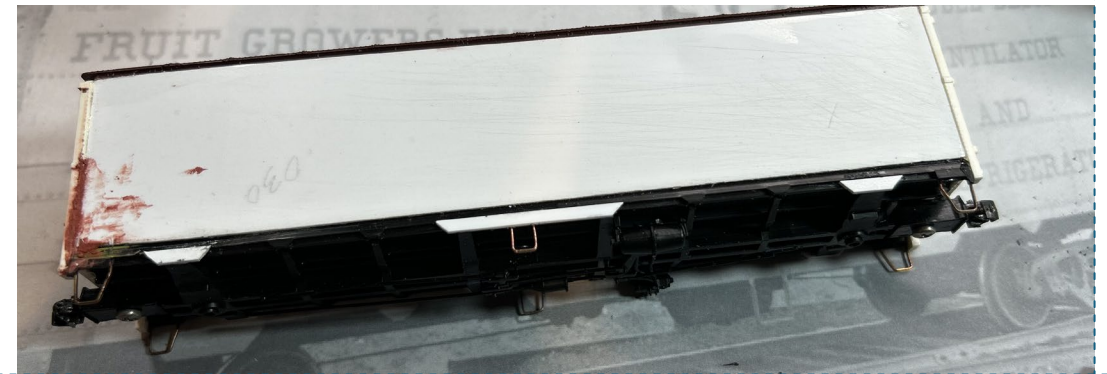
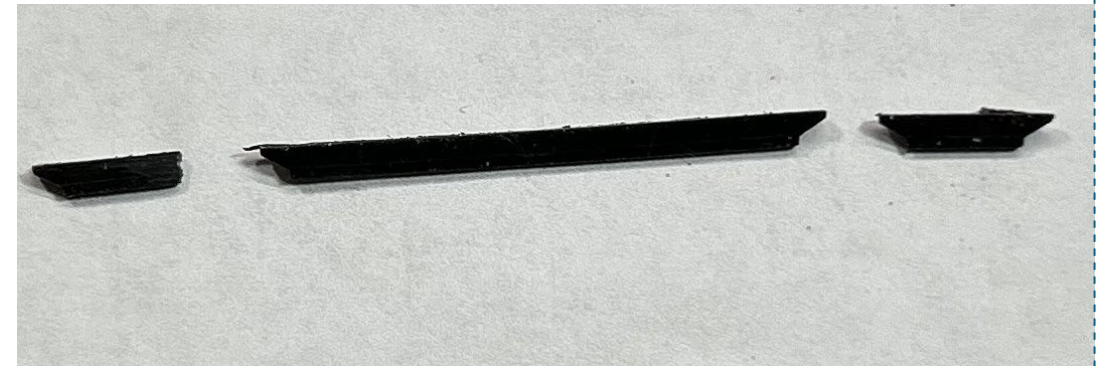
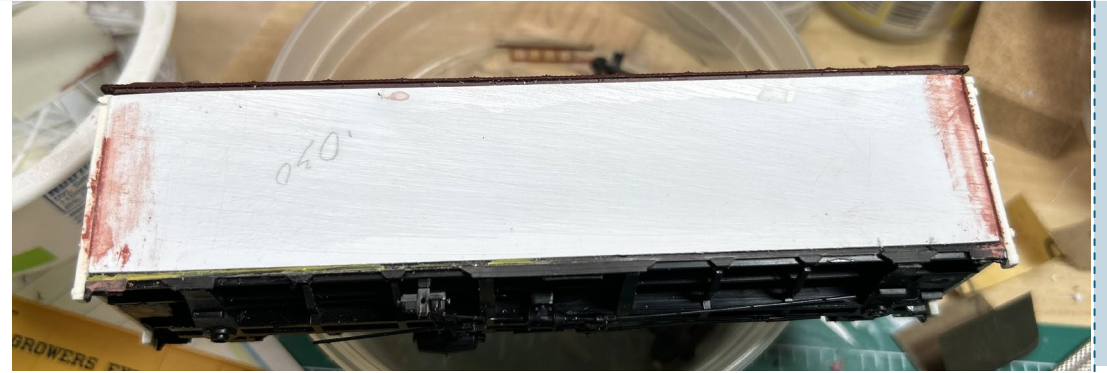


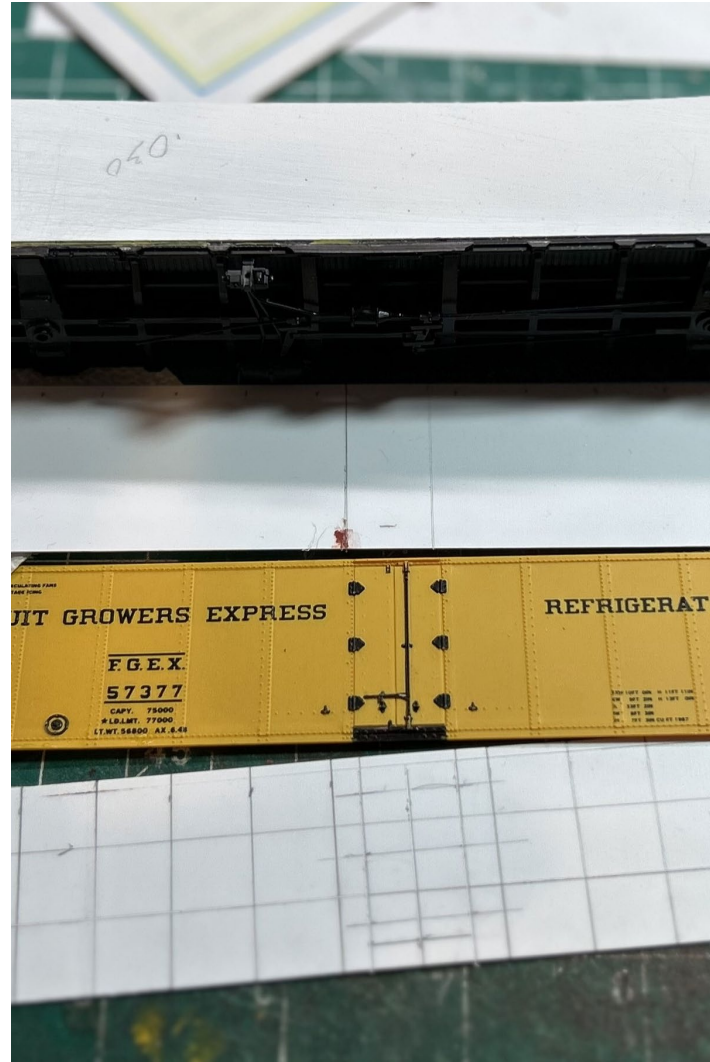
Next - I attacked the roof. It was already finished but had metal roof walk. I removed it and filled the holes. I made a new wood roof walk from 3 - .020 by .060 strips



Another small detail
that I changed – tabbed
side sills

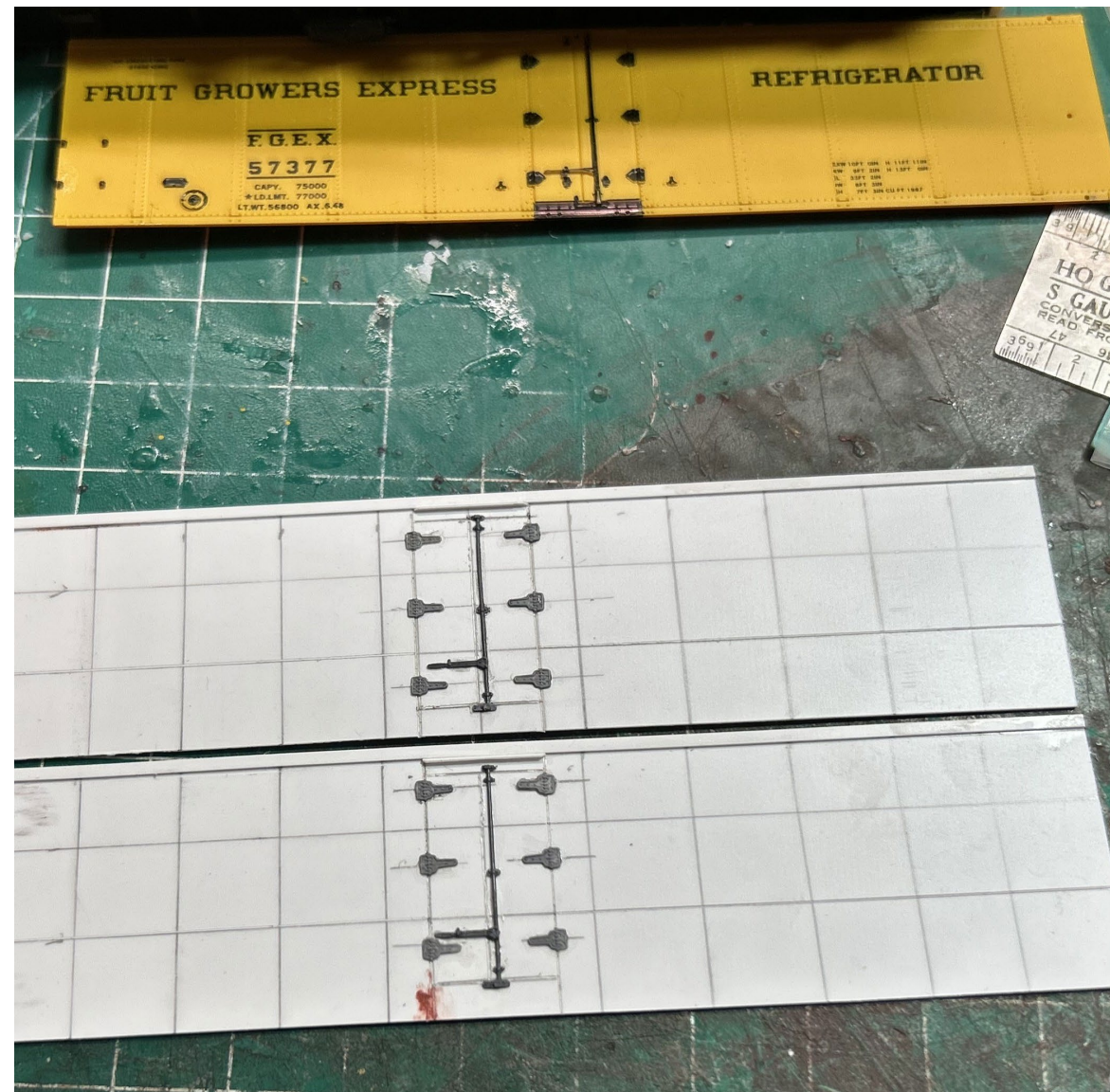
And I filled in the gaps
on the car sides where
the ends meet. Bondo

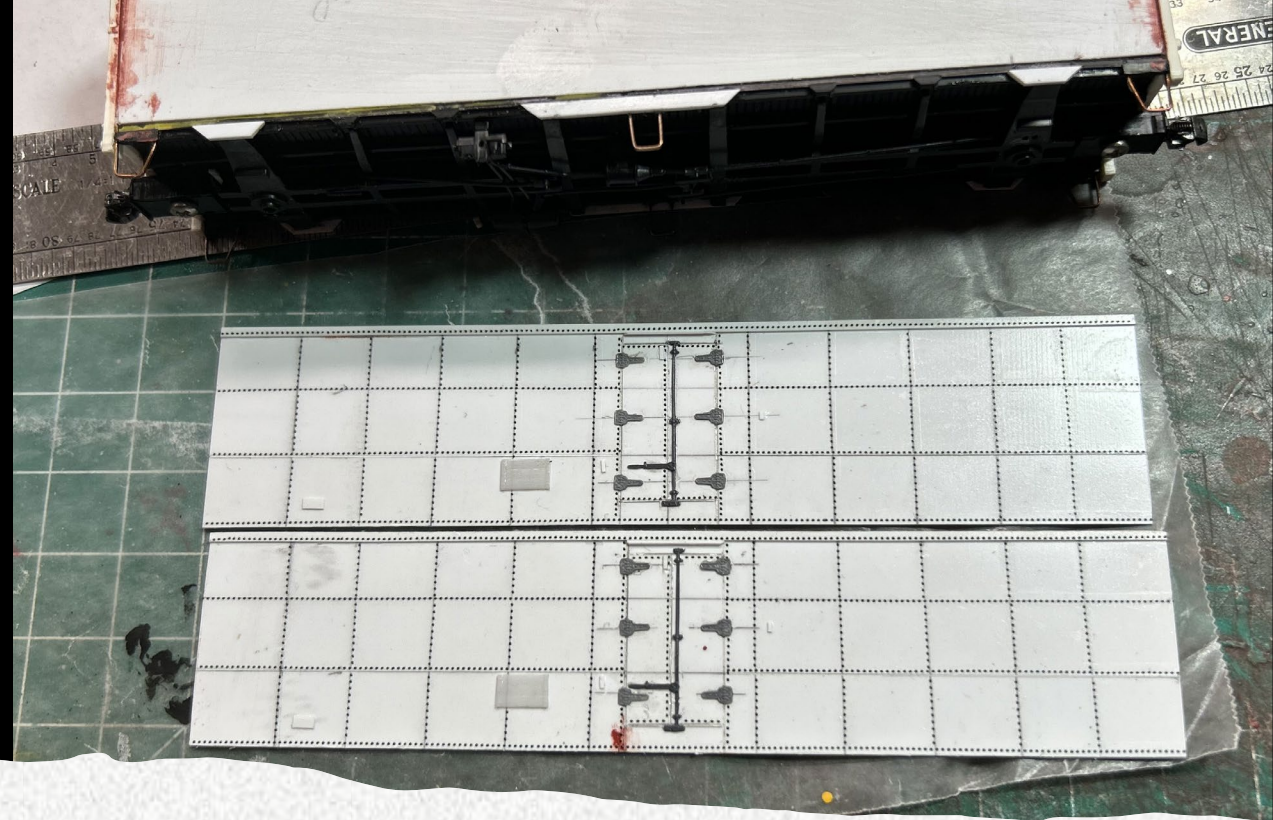
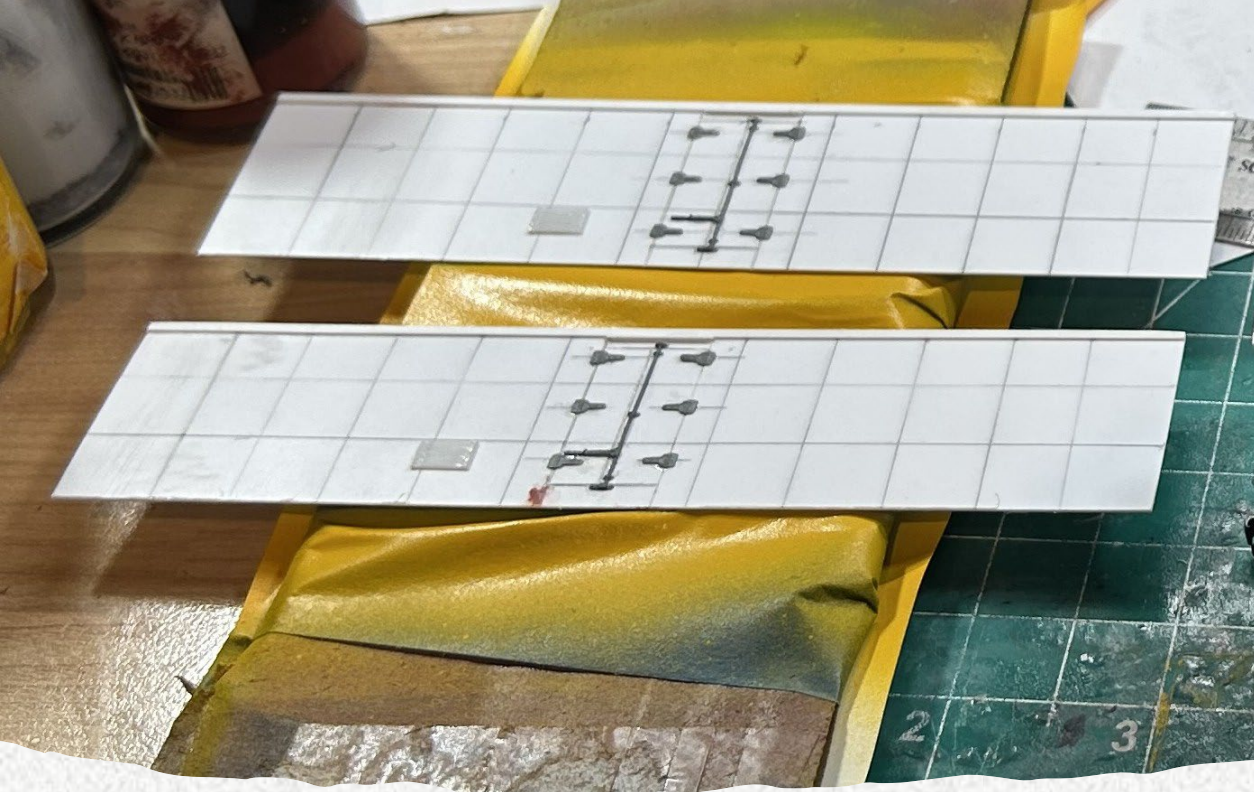




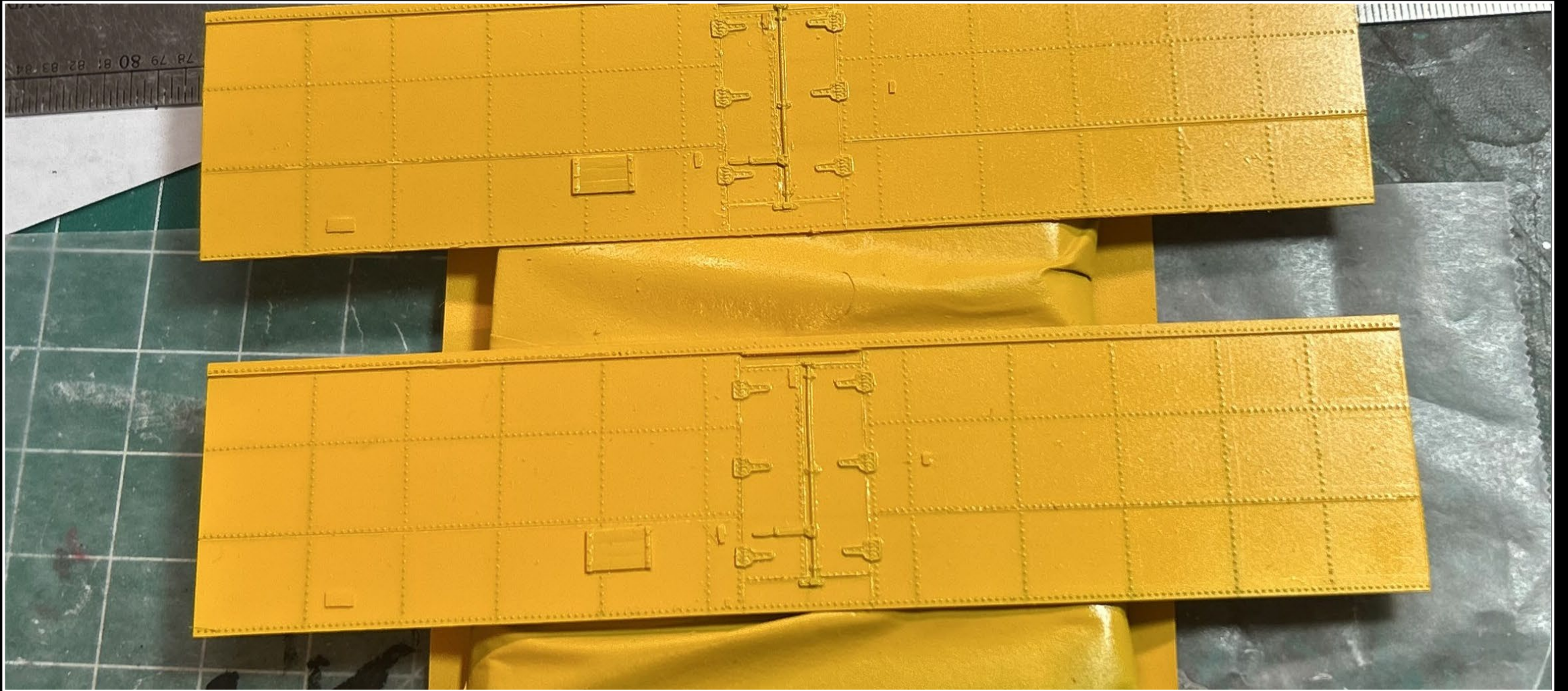
Now we will
do the car
sides

After rivet lines are laid out, we set the door latch and hardware positions

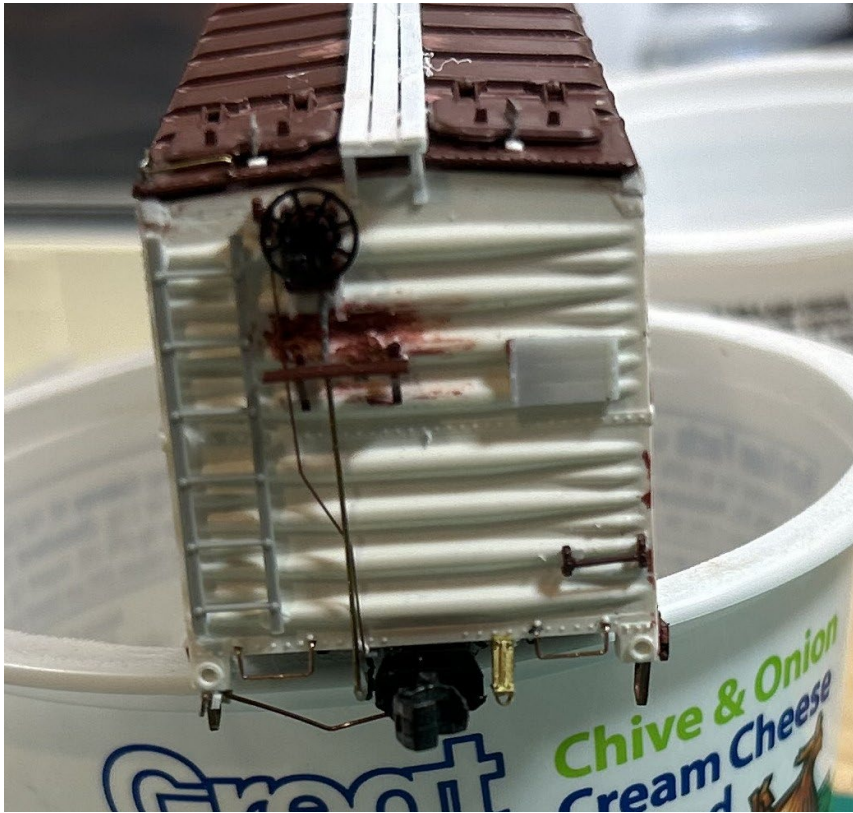




Then – Spray the sides with gloss so we can add Archer Rivets and side details

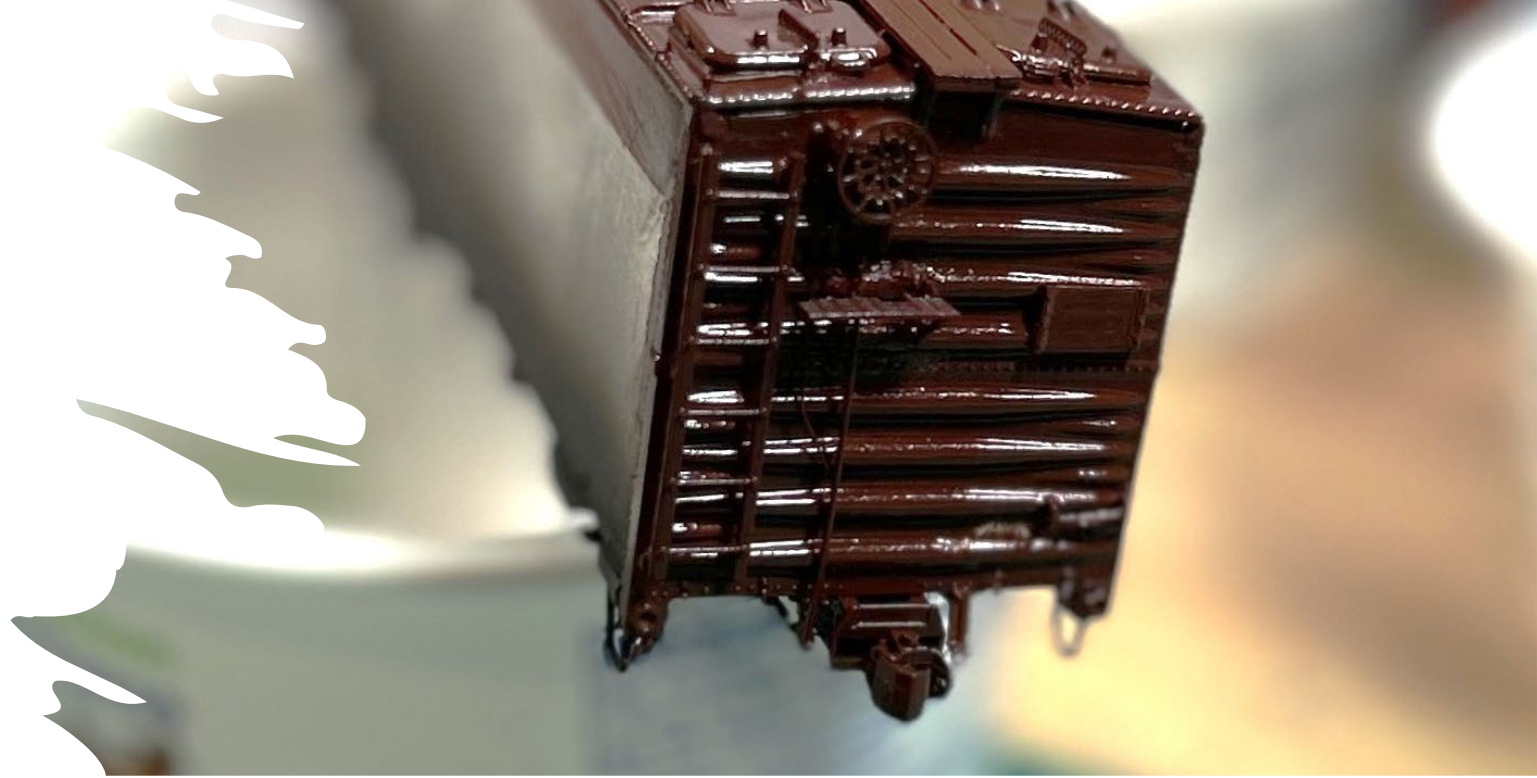


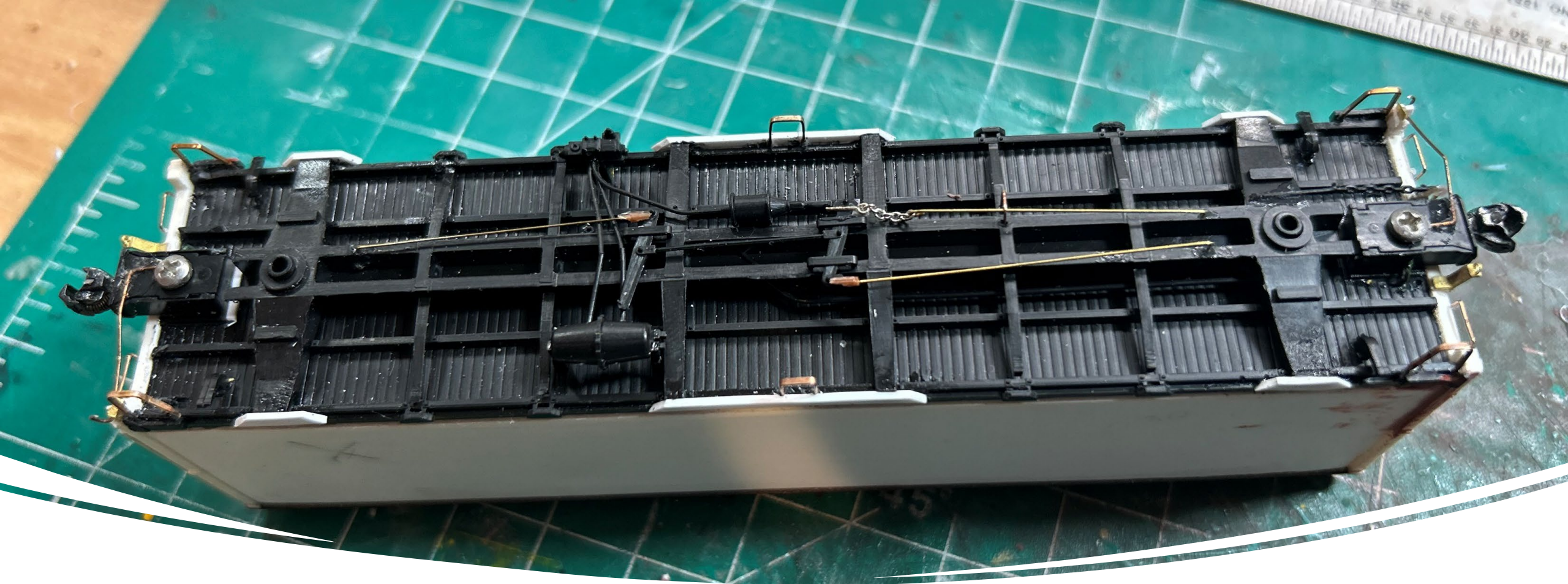
Sides have been painted with Floquil Reefer Yellow



Next, I added details to the roof, body and car ends

Next - paint the roof, ends
(Floquil boxcar red with some
oxide mixed in) and underbody
with a mixture of blacks, red and
grey)





- Then I finished up the brake rigging. Confession, I cheated on this and used what the previous owner had done but cut the levers and made new ones from .011 wire. I also used the IM drains to the underbody and the A line sill steps



Then I glued on the painted car sides and added the ladders (Details West) and grabs (Kadee). Car now ready for touch up paint and decals.



Decaled and ready to weather
and touch up bad spots

Out of the
shops and
ready to roll





A great Many Thanks to :

- John Golden,
- Al Brown,
- ACL-ACL Historical Society,
- Ted Culotta,
- Bob's Photos,
- Arnold Menke Photos
- And especially to the Late Bill Welch for photos, information and inspiration.

