RESIN CAR WORKS

R.C.W.

P.O. BOX 42

BYRON, IL 61010

Photo Courtesy Ken Soroos

History

The SOO Line 6001-6399 odd numbers only, class HM, built by Siems-Stembel in 1930, A total of 200 50-ton twin hoppers were in this series. They had 34'9" inside lengths and a 2230 cubic feet capacity. Photos of these can be found in the SOO Line Book by Ken Soroos and at the Lake States Railway Historical Association on their SmugMug Site. Lake States Archive Search term Soo Hoppers

Getting Started

It is recommend that before you start that you familiarize yourself with additional information and photos that pertain to your model. Also please review the instructions and kit contents carefully identifying the parts that pertain to your model as there are options on the resin parts sheets for different variations.

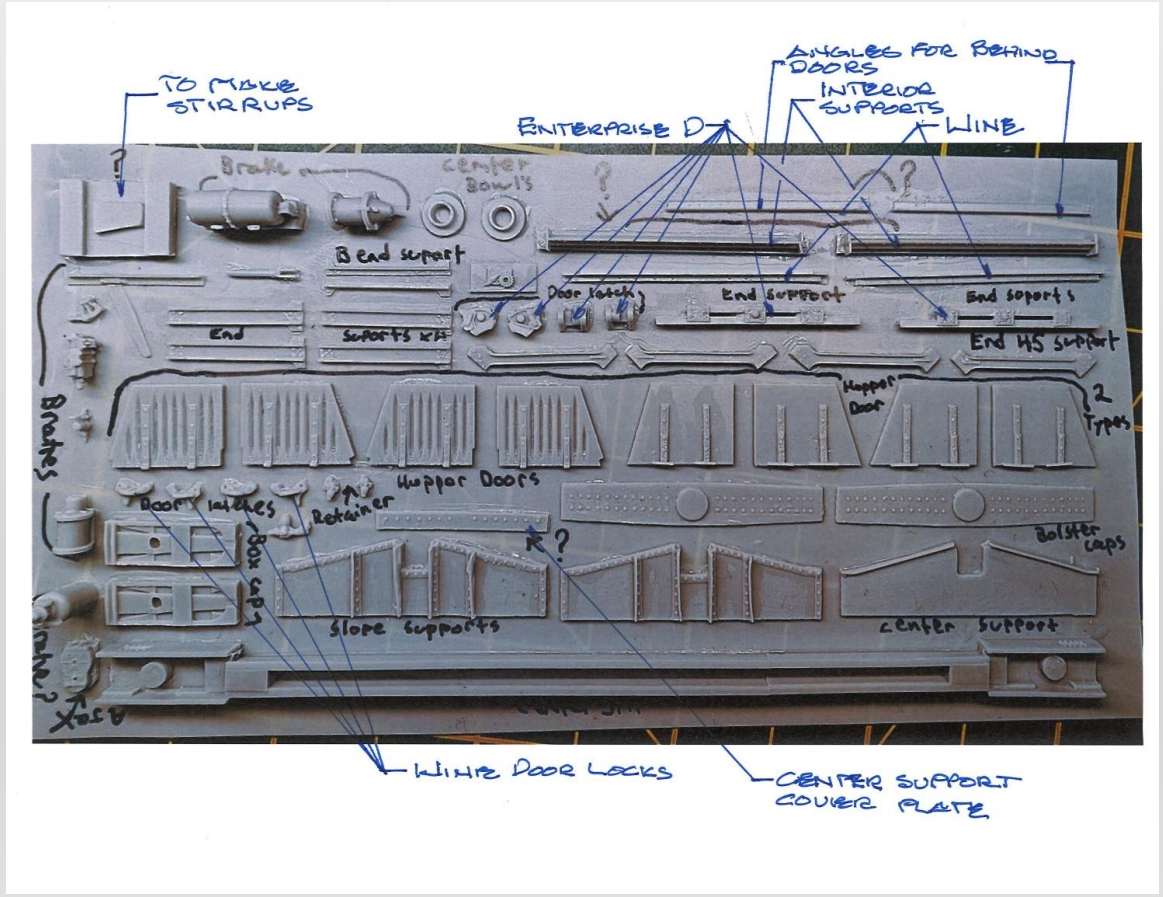
- First, give the resin parts a good cleaning with Dawn and a toothbrush too remove any mold releasing agents. A light sanding of joints also helps bond parts. Dawn Powerwash Spray works very well also.
- The car parts are best attached with ACC. When the term "cement" is used in these instructions, it refers to ACC.
- GOO or other similar products are not recommended for construction except in small quantiles, as they will soften the casting material.
- When a measurement is given, it's in prototype feet and inches.
- When the word "scrap" is used, it refers to an item that the modeler is to supply

Instructions and Model by George Toman
Oct 2024

Construction

The photo to the right shows the kit contents

The photo below shows the resin parts sheet with callouts to the different options



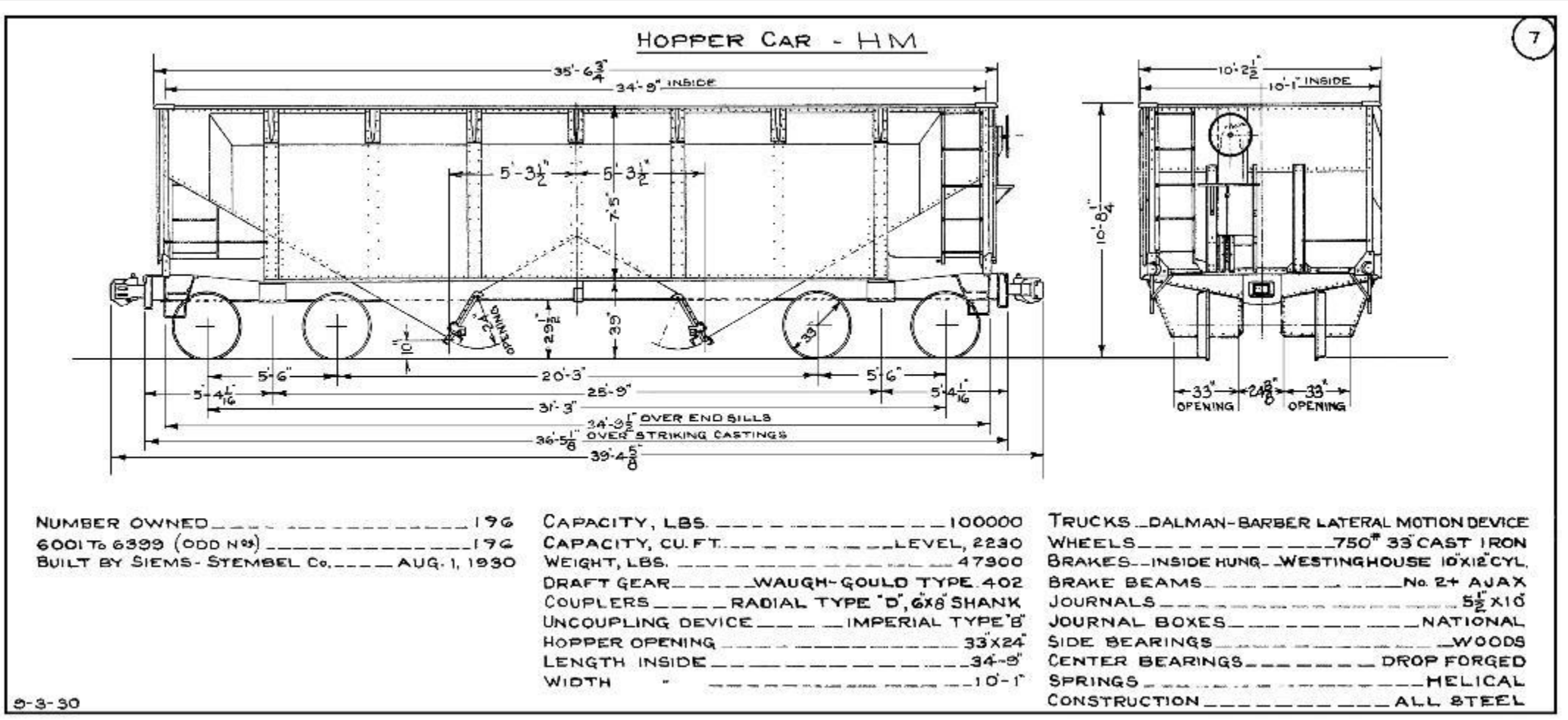
Additional Parts Required

Tahoe Dalman Barber Lateral Motion Trucks

Scraps styrene

Brass wire .008, .010, .015, .020

Hopper Drawing for HM courtesy of Ken Soroos



NUMBER OWNED	196
6001 TO 6399 (ODD NOS)	196
BUILT BY SIEMS-STEMBEL CO.	AUG. 1, 1930

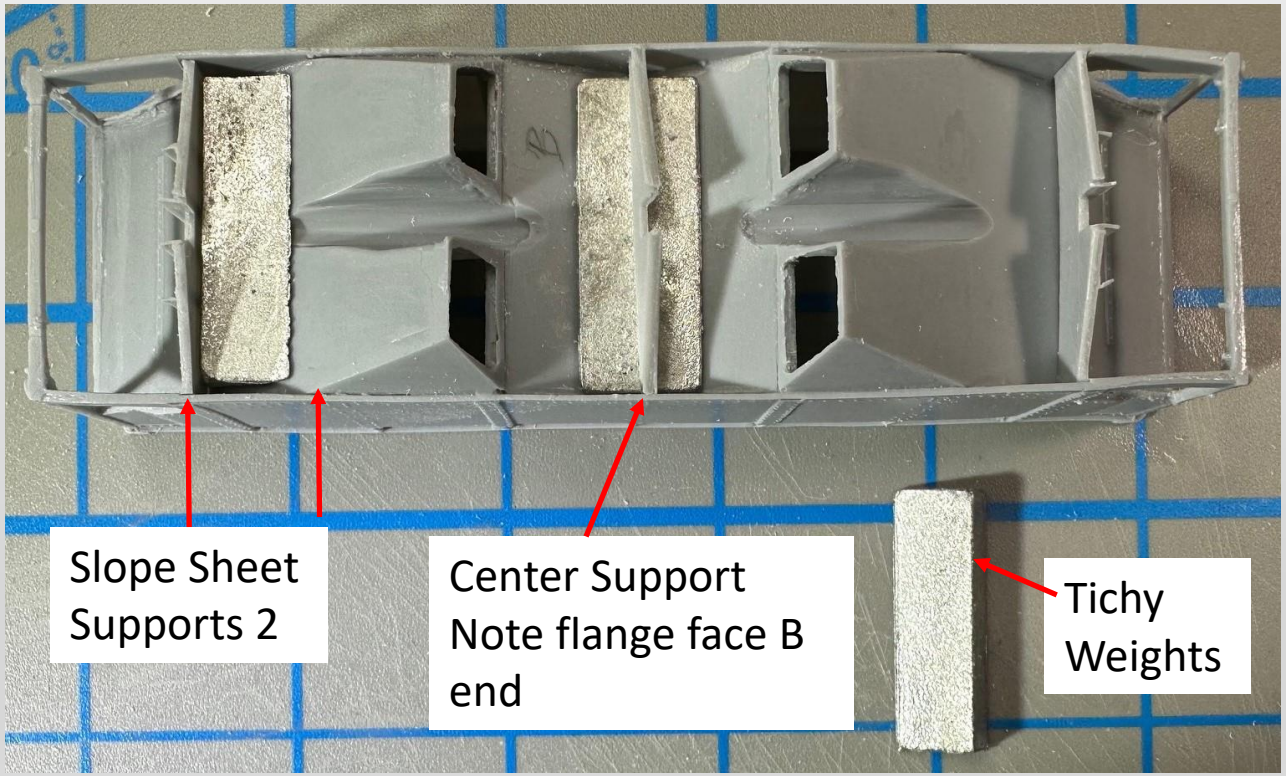
CAPACITY, LBS.	100000
CAPACITY, CU. FT.	LEVEL, 2230
WEIGHT, LBS.	47900
DRAFT GEAR	WAUGH-GOULD TYPE 402
COUPLERS	RADIAL TYPE "D", 6"X8" SHANK
UNCOUPLING DEVICE	IMPERIAL TYPE "B"
HOPPER OPENING	33"X24"
LENGTH INSIDE	34'-9"
WIDTH "	10'-1"

TRUCKS	DALMAN-BARBER LATERAL MOTION DEVICE
WHEELS	750# 33" CAST IRON
BRAKES	INSIDE HUNG- WESTINGHOUSE 10"X12" CYL.
BRAKE BEAMS	No. 2+ AJAX
JOURNALS	5½"X10"
JOURNAL BOXES	NATIONAL
SIDE BEARINGS	WOODS
CENTER BEARINGS	DROP FORGED
SPRINGS	HELICAL
CONSTRUCTION	ALL STEEL

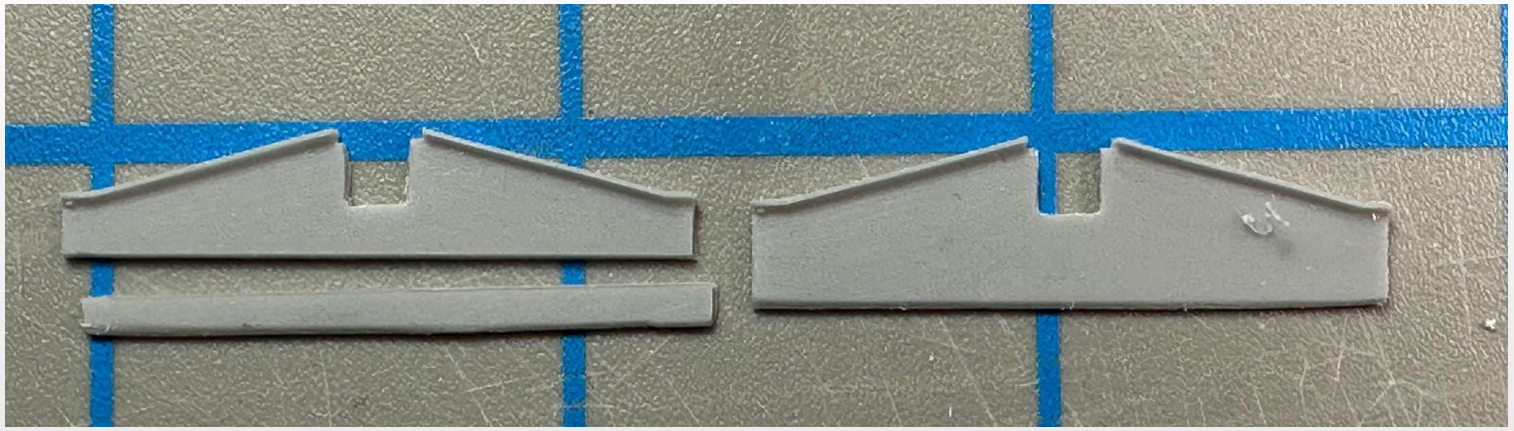
5-3-30

- After washing your resin parts, begin construction by cleaning the resin castings of flash and removing the required parts from the resin parts sheet. The SOO used wine hardware and the Corrugated Doors
- Install the end slope sheet supports so that they are lined up with the vertical portion of the side sheets. The top of the edges will need to be sanded to match the angle of the slope sheet so it fits properly.

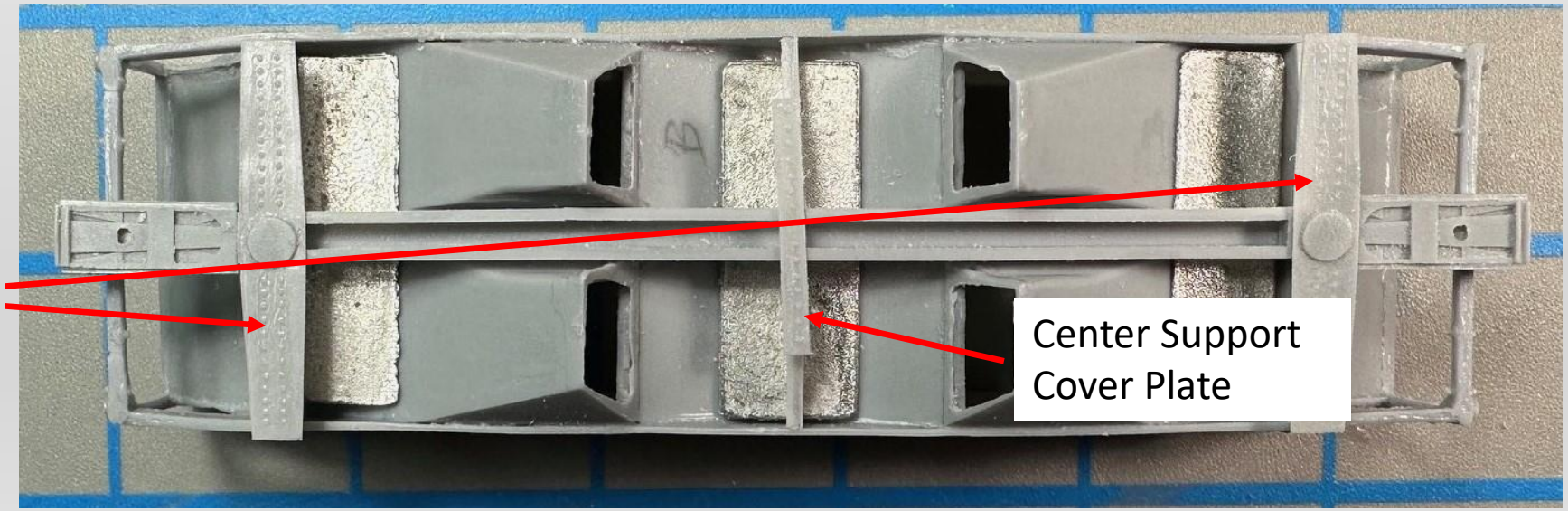
Photo to the right shows the Hopper Body, Slope Sheet Supports, Center Support and Tichy weights 3.
Note: nothing was cemented in place as this was a trial fit. See next page for modification to center support



Modification to Center Support to clear Tichy Weight.
I temporally placed the weight in place and cut the required amount for cross beared to fit properly
Note the Flange portion that faces the B end of the car

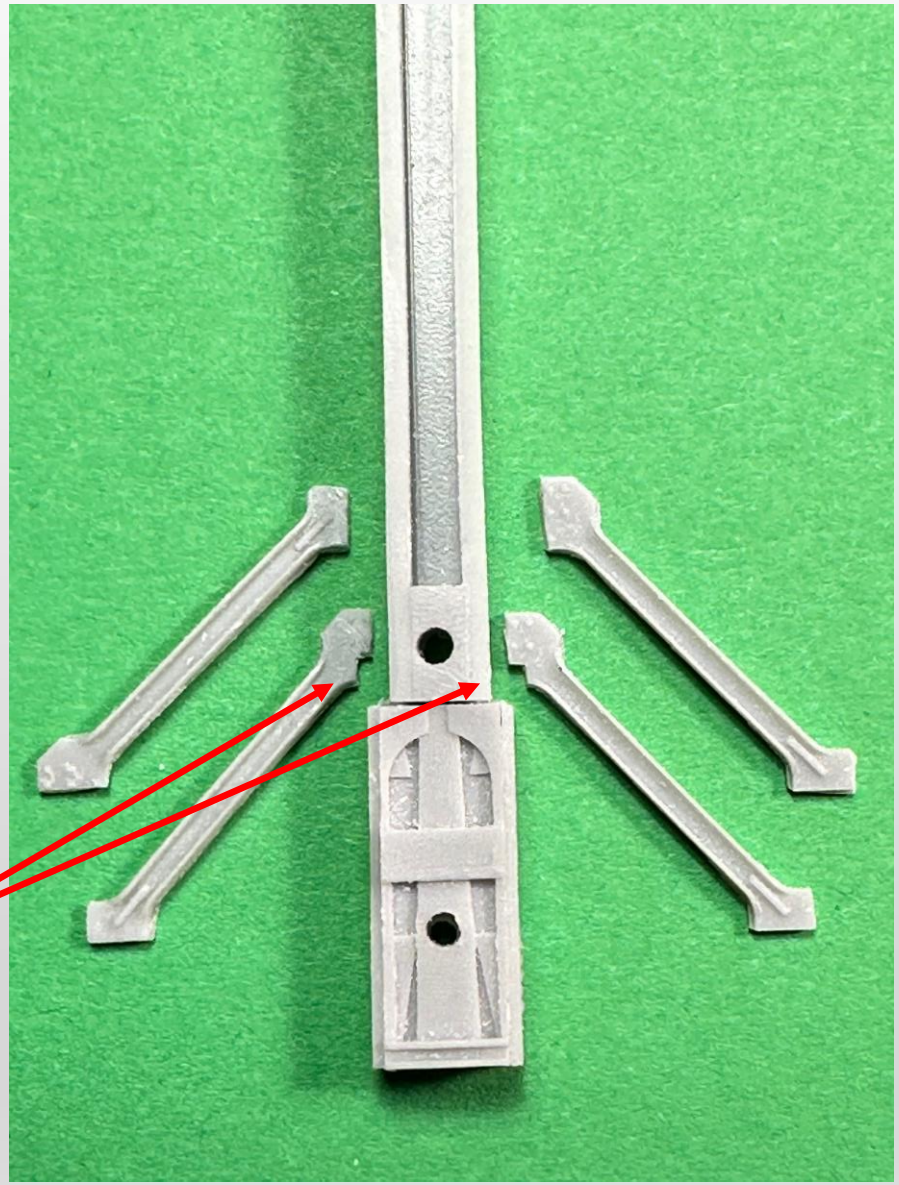


Next is trail fit the Center Support and make sure the everything aligns properly. This includes the Draft gear covers as well.. Below is a photo of these pieces being test fit.



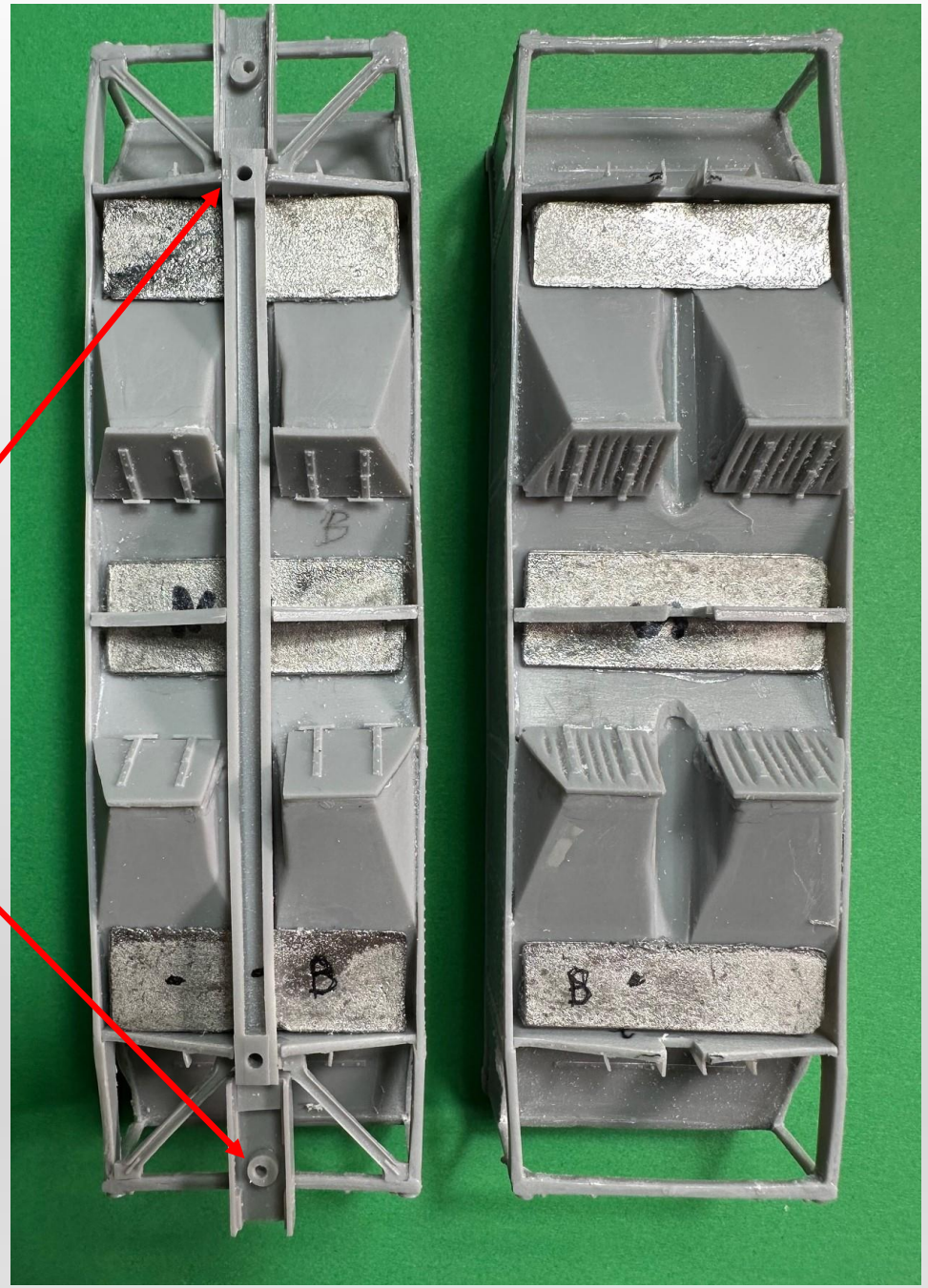
The corner braces were next cleaned and modified as seen in the phot to the right to fit properly. Note hoe a small notch was made to fit the draft gear and centersill.

Note the notch to allow proper fit
The top 2 have not had the notch made yet



All underframe parts fitted and cemented in place except for Bolster Caps and center support cover plate

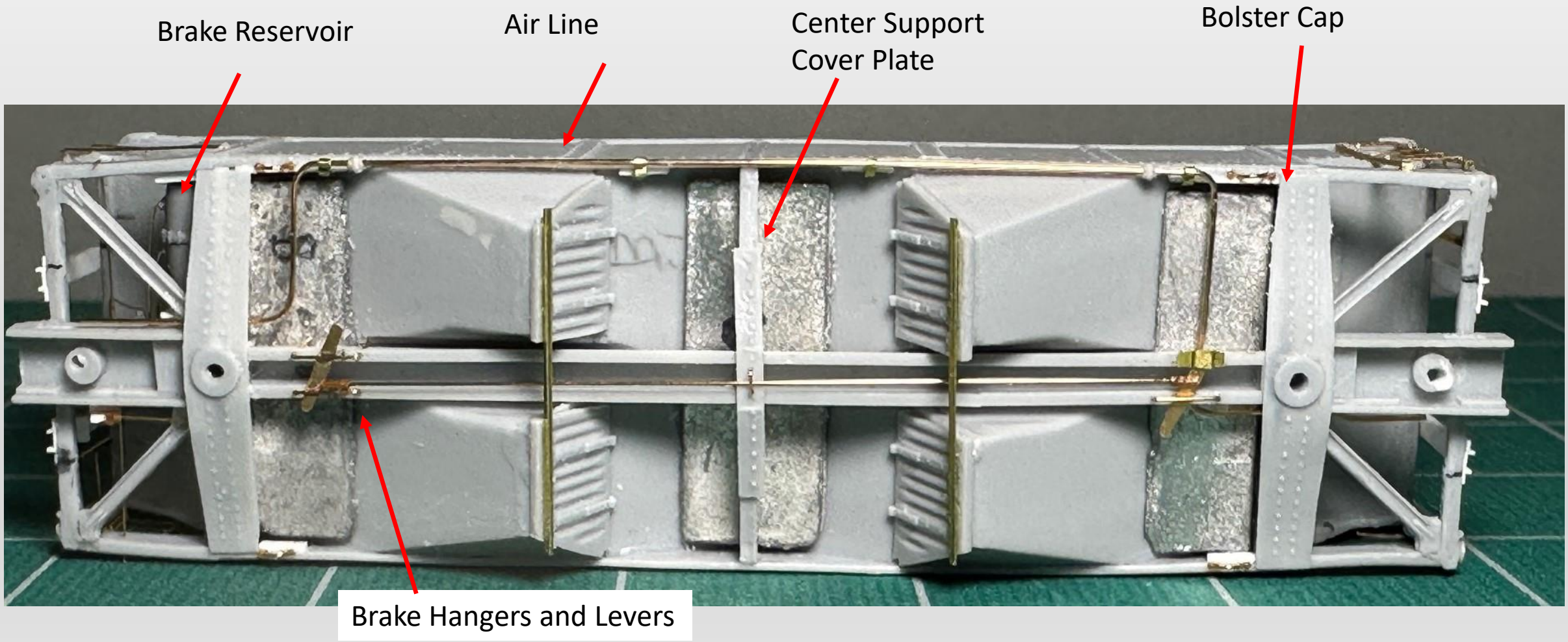
Note that the bolsters have been tapped along with the draft gear for #2-56 screw



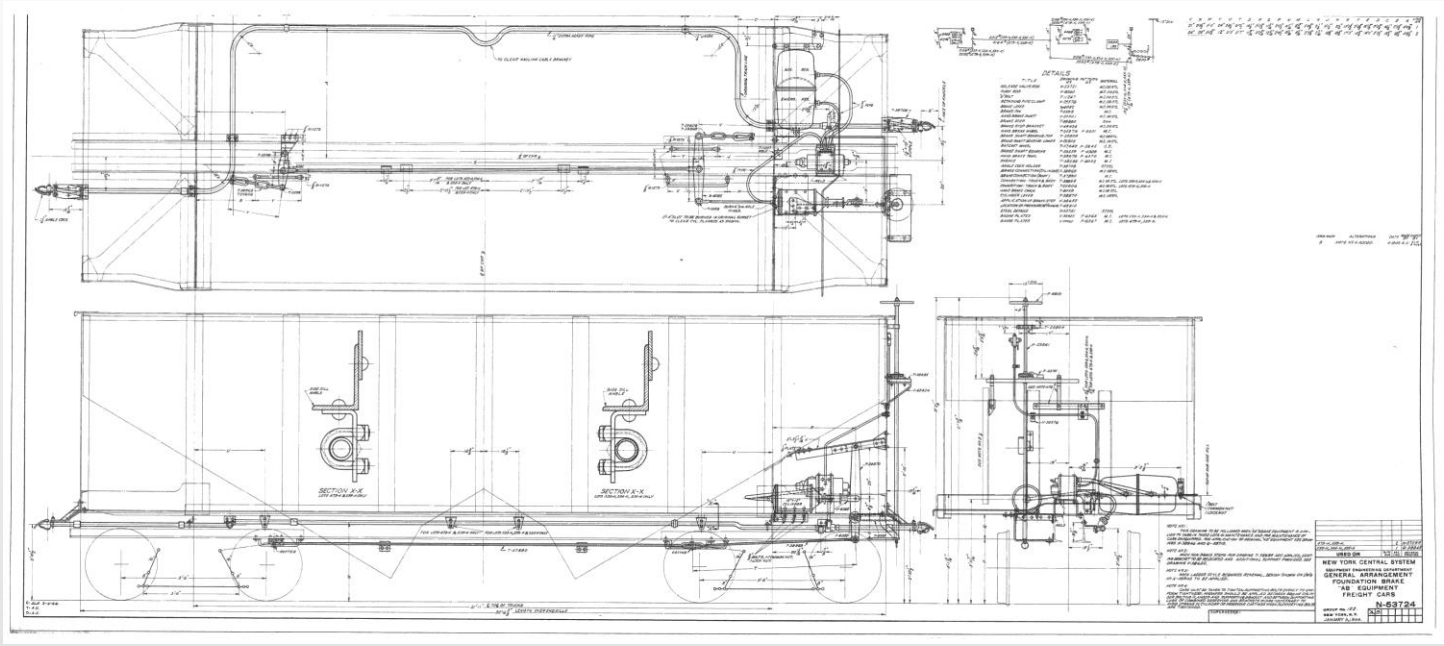
The Soo Hopper is on the right with the corrugated doors. Also note the B end is labeled on the weight.

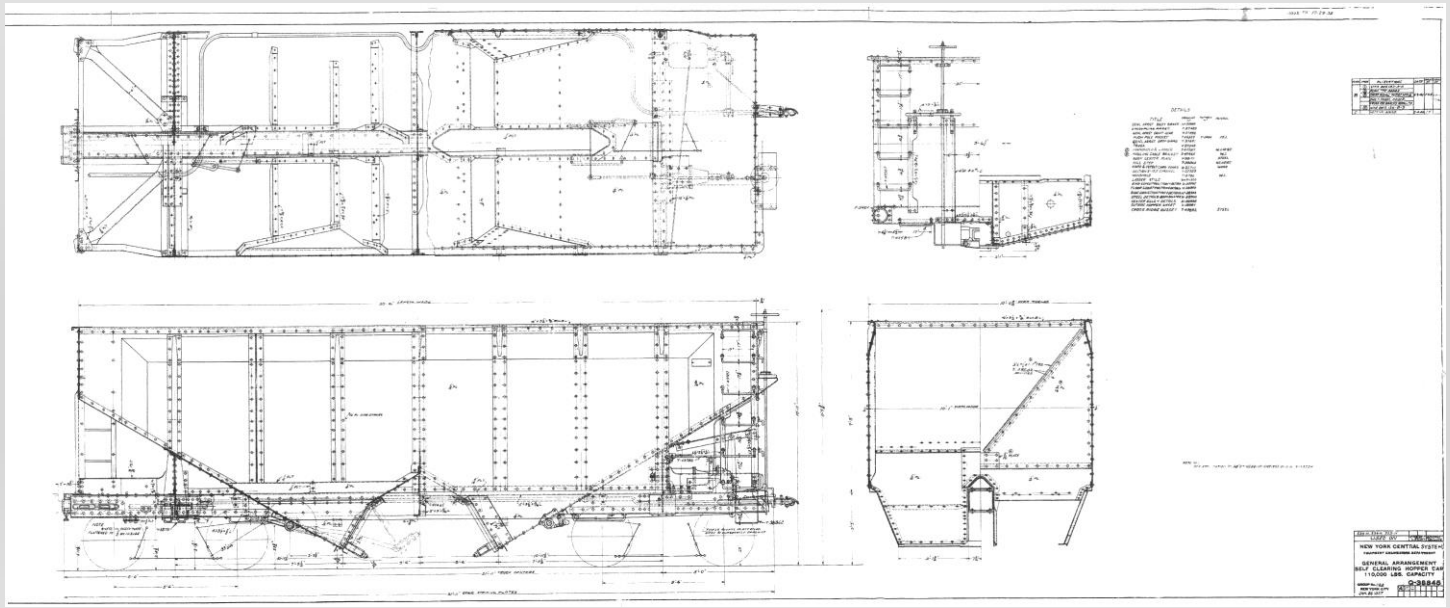
The Hopper on the left is an almost identical one for the NP that had plain steel doors. From this point on details differed

From this point either AB or K brakes are added to the B end. In the test build of the Hopper, I chose to ad the ladders 1st and then install the Tichy AB Brakes along with the .020 air line and other brake hardware as seen in the photo below. See next page for 2 NYC Brake Arrangement Drawings that are for similar twin hopper



AB Brake General Arrangement Drawing

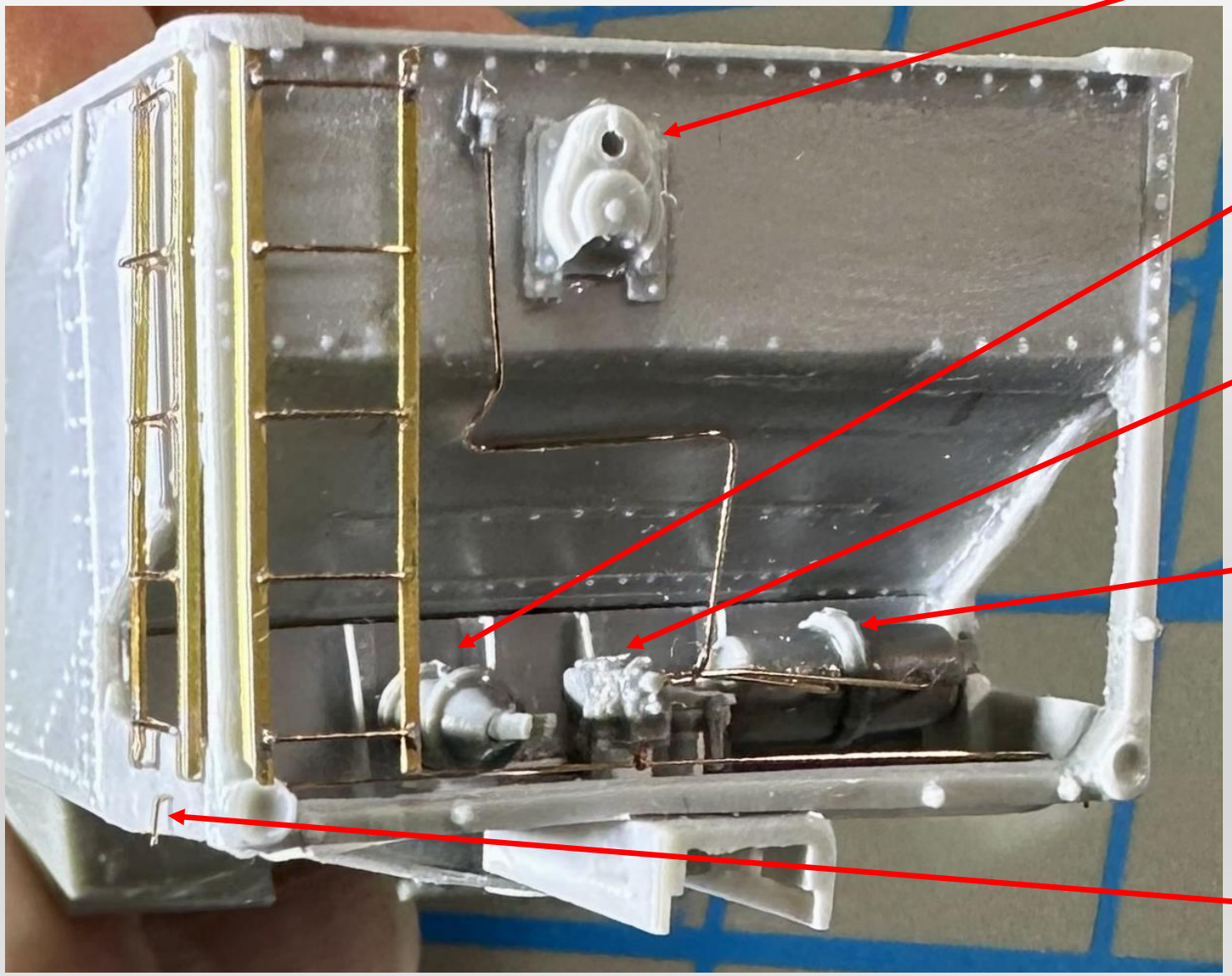




k Brake General Arrangement Drawing

Both Drawings from RCW website

Brass Stiles and .010 wire were substituted for the plastic supplied ladders and installed in place before installing the Tichy AB Brakes.



A Tangent Equipco Brake Housing was installed along with the Tichy retainer valve.

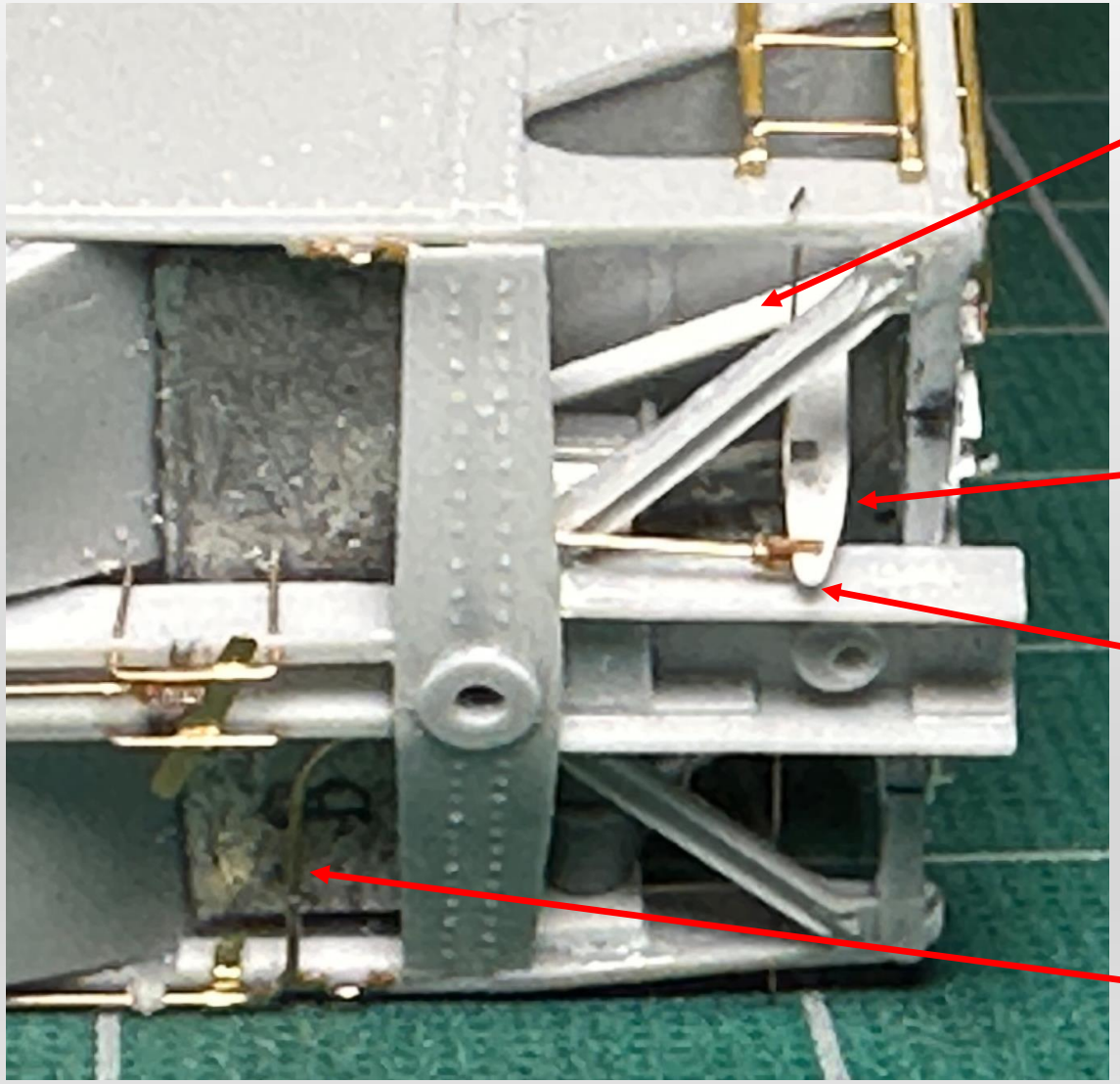
Brake Cylinder mounted on scrap styrene riser to cross brace

Control Valve mounted on a scrape styrene riser on top of Center sill and Draft gear box

Reservoir mounted on scrap styrene riser to crossbrace and side sill

.0125 Tichy wire used for piping, except .008 for retainer

Note release rod .008 tichy wire

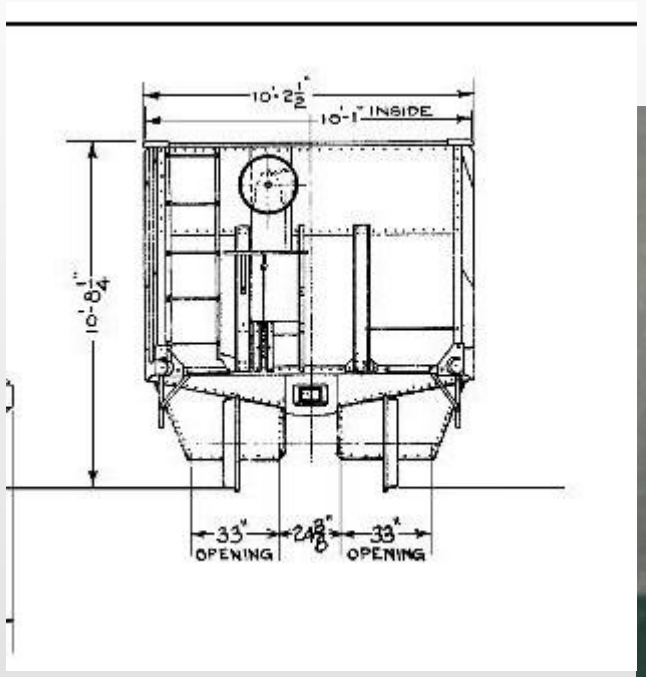


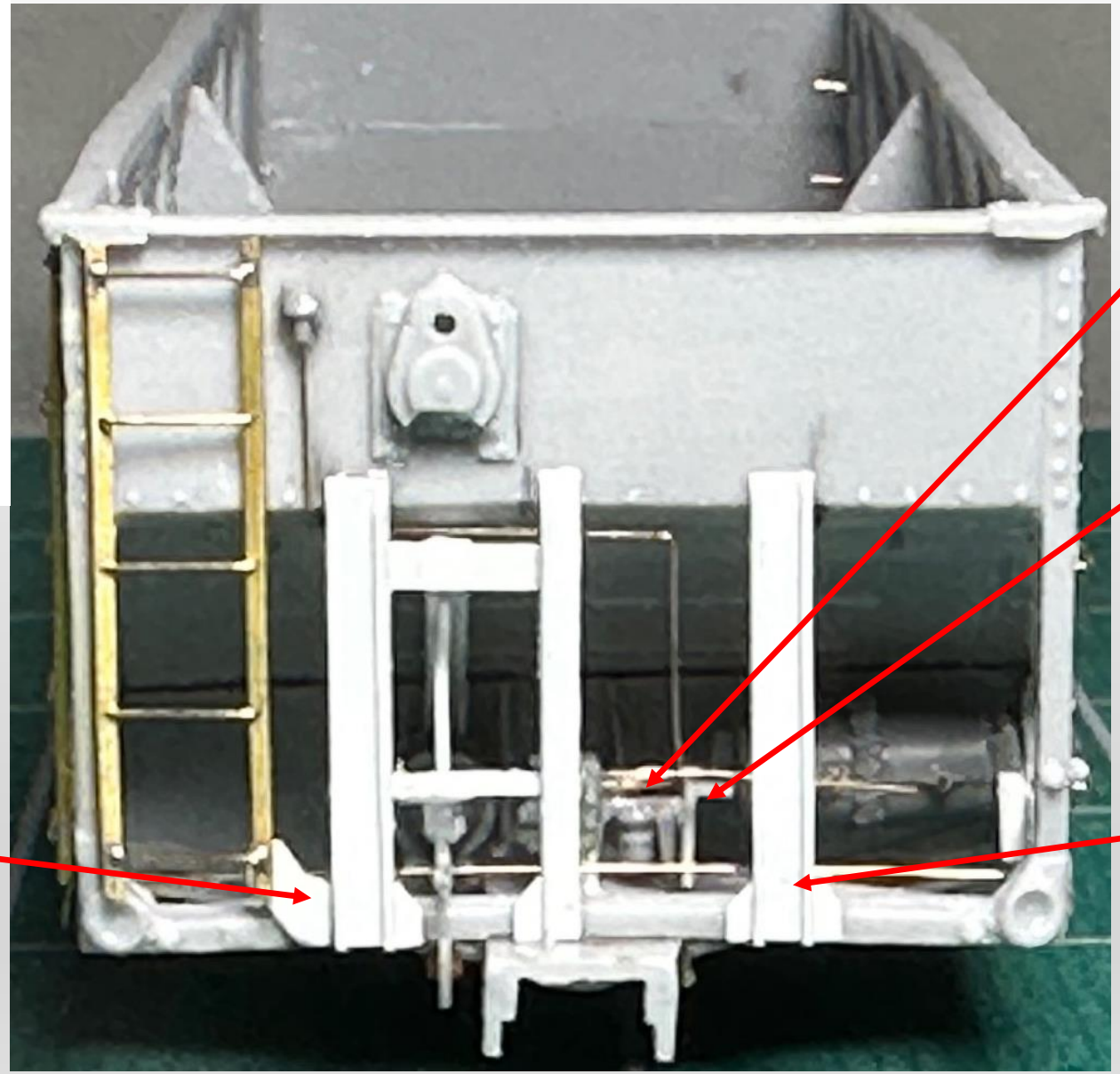
Scrap styrene mounted on angle parallel to slope sheet. This is what the top of the brake lever mounts to and pivots from

Brake lever made from .010 styrene

Brake rod attached to clevis with ½ Tichy turnbuckle

.020 Train Line routed along side sill





Note Control Valve dirt filter

Scrap styrene bracket can be seen on left of reservoir

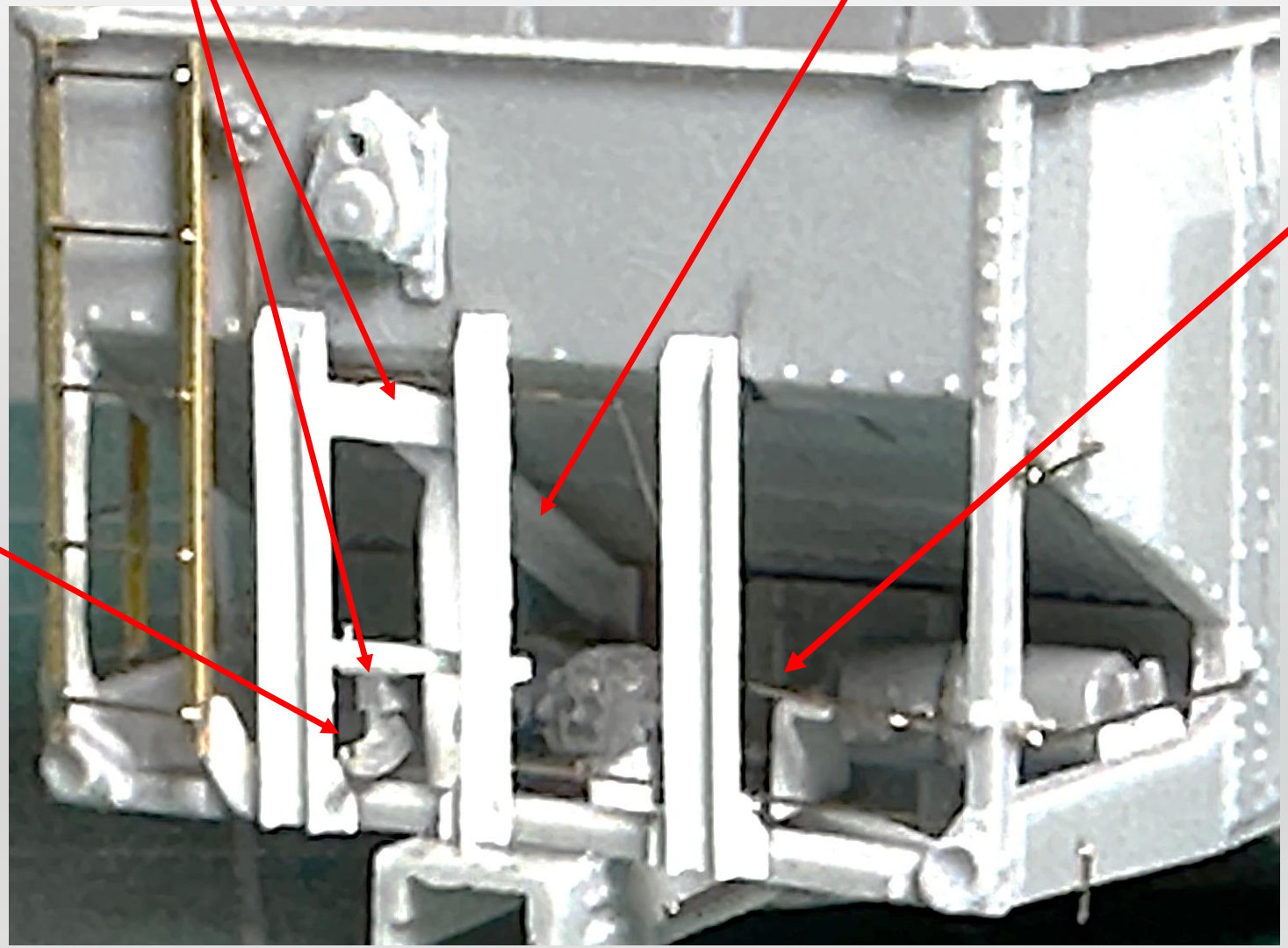
Resin End Braces from kit substituted with one from scrap styrene. Note the lower left of brace that also supports right ladder stile.

Rivets to be added

Resin End Braces from kit substituted with styrene new

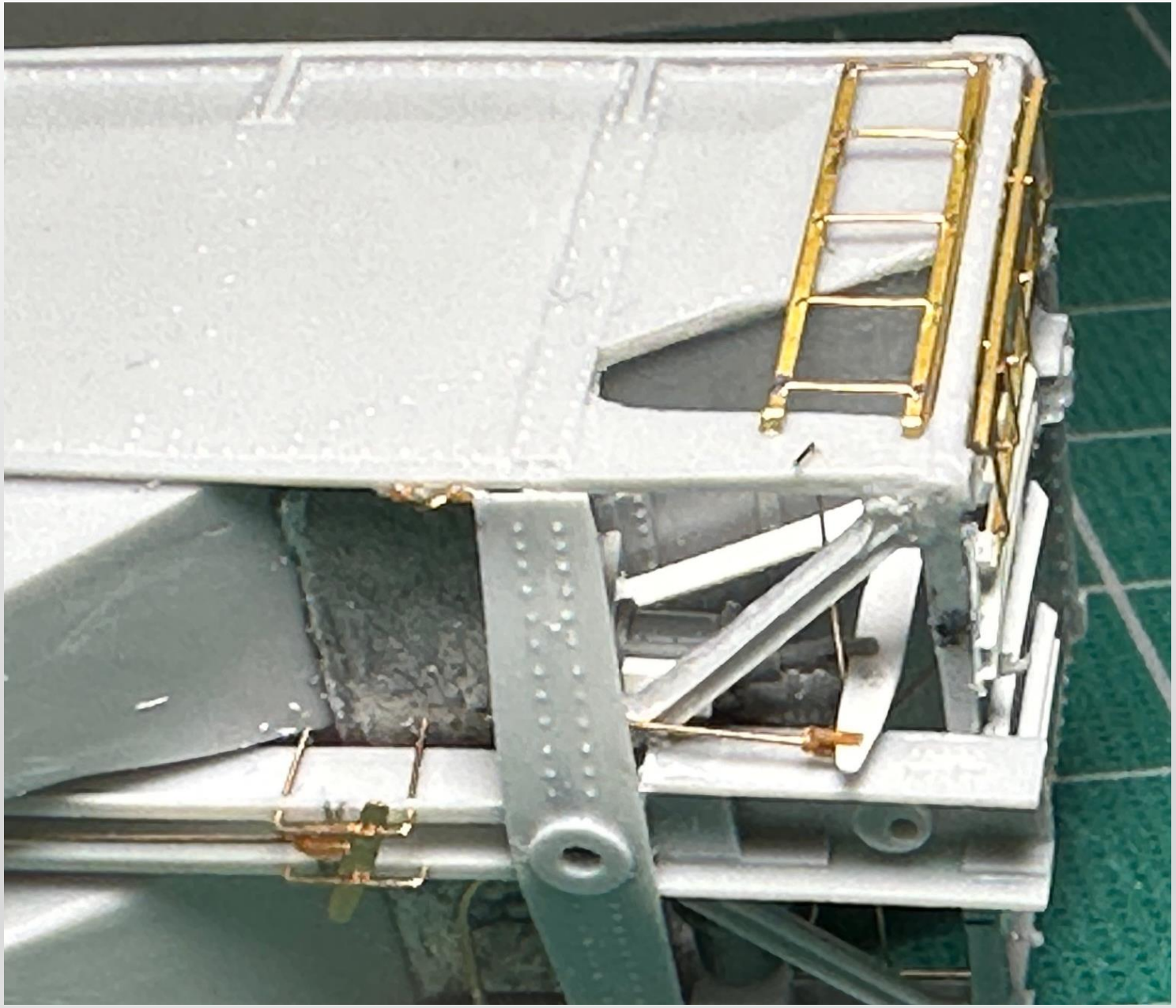
Note horizontal scrape styrene used between vertical braces.

Scrap styrene support parallel to slope sheet. Brake clevis mounts and pivots to the piece

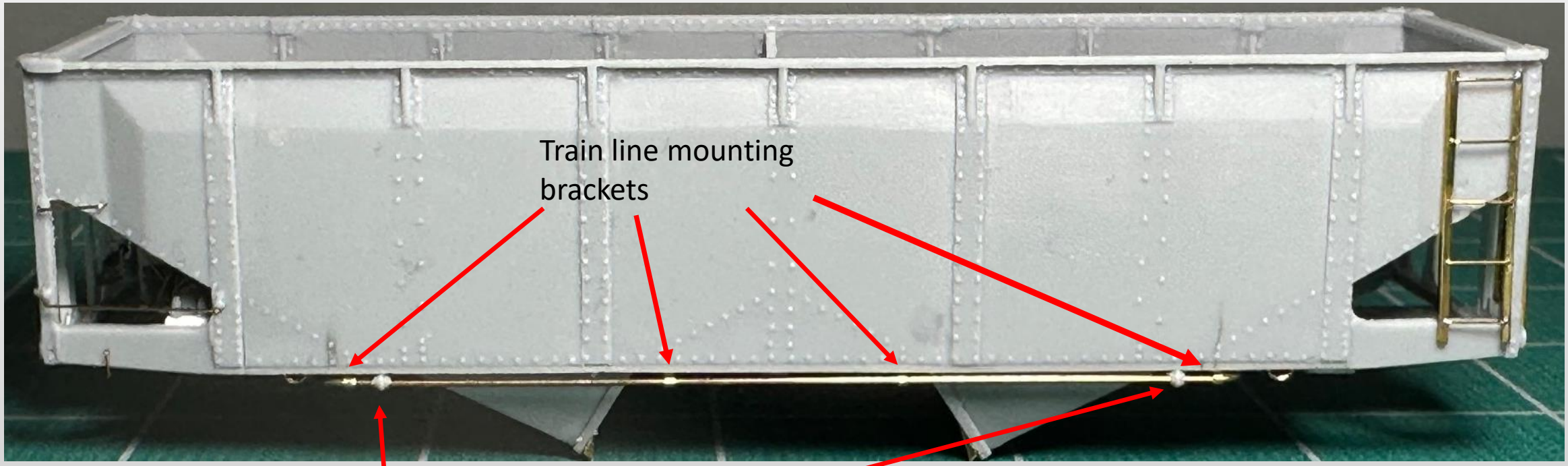


.010 Tichy wire grabs bent to proper length

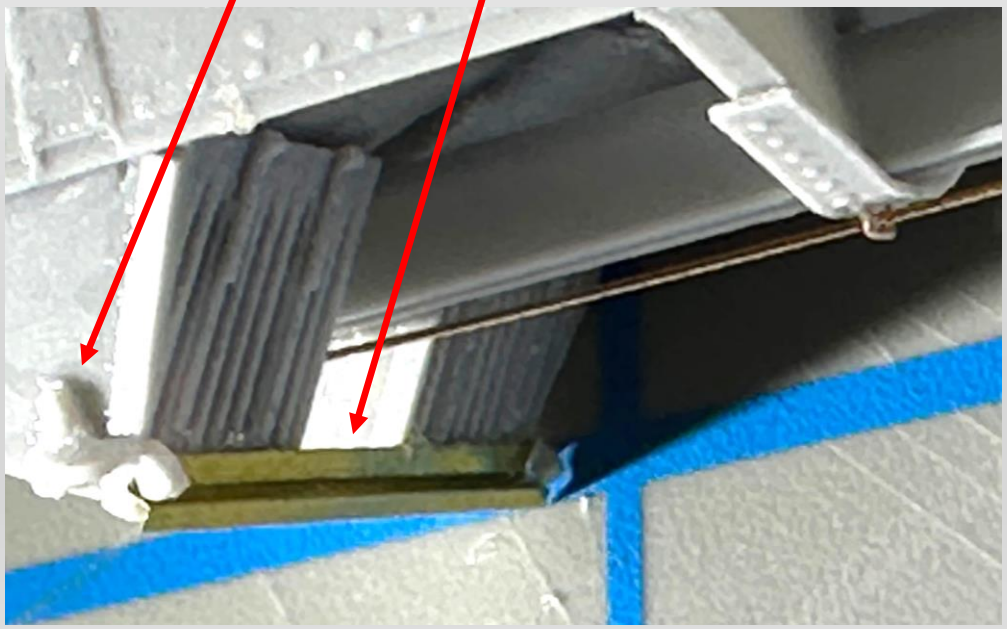
Tichy Brake Fulcrum



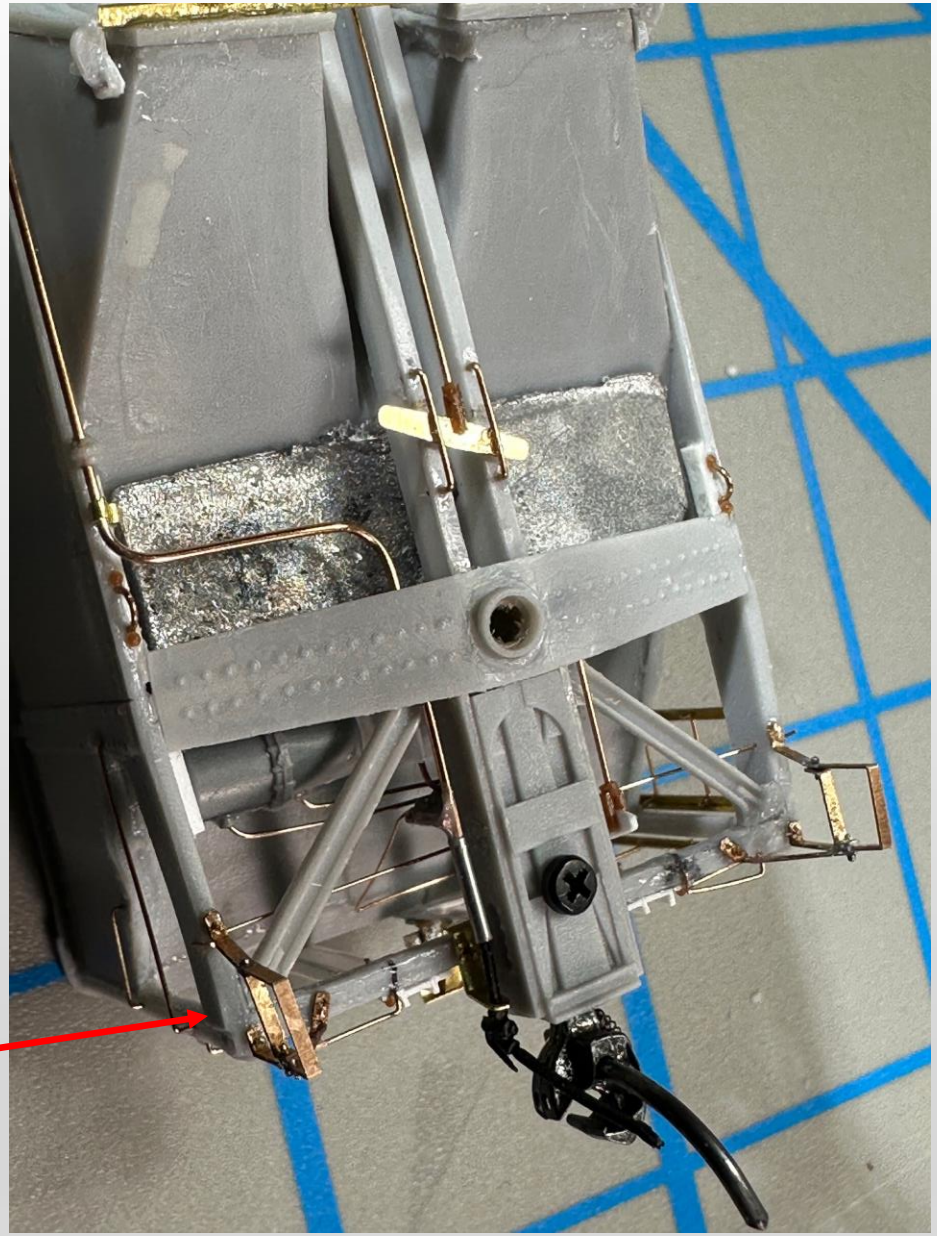
Closeup of Brake Cylinder details

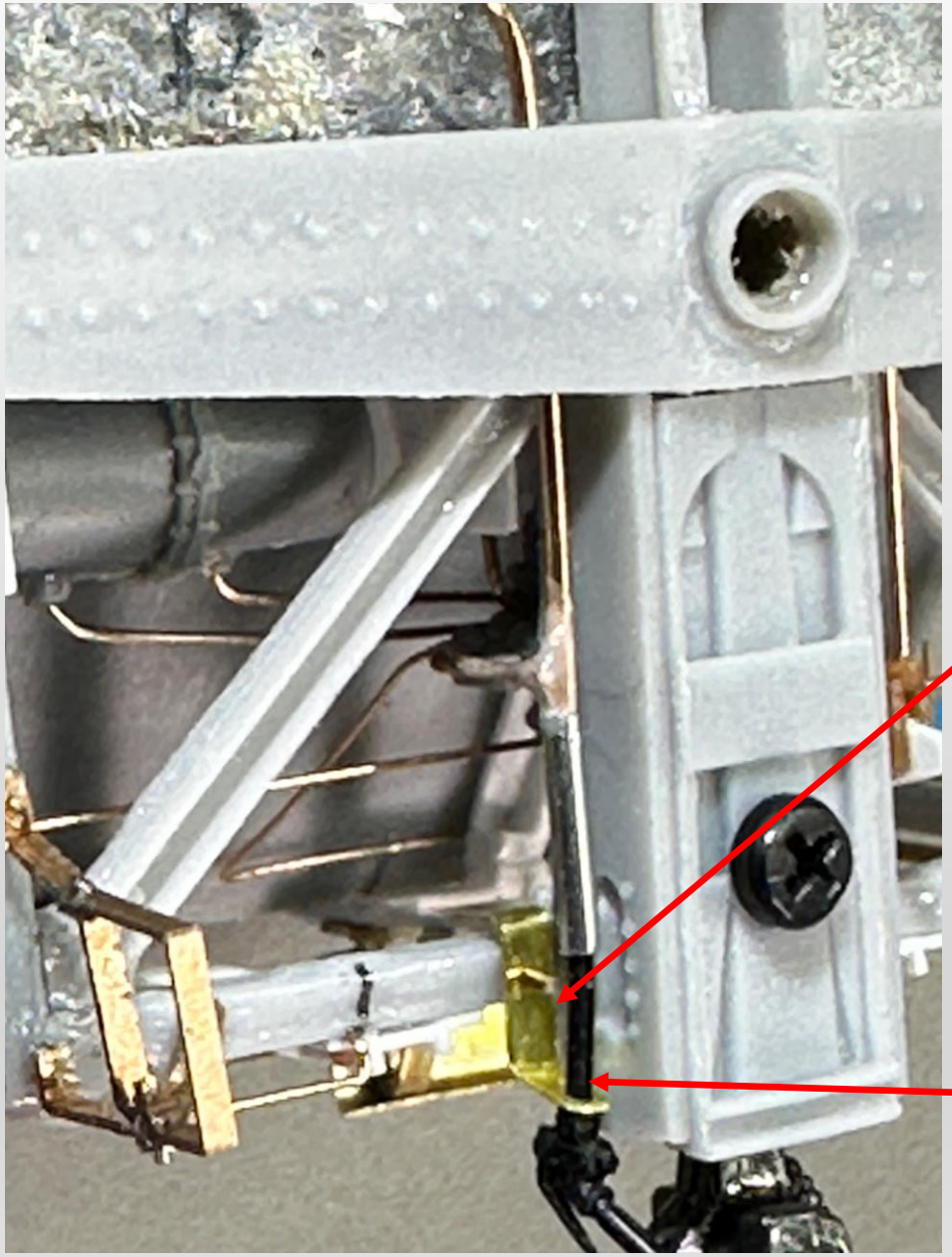

Train line mounting brackets
3D printed union’s on train line

Wine door hardware
Note a custom cut and bent brass Z bar was made from .004 brass instead of the included resin part



Modified Yarmouth GATC Stirrups used and pinned to frame

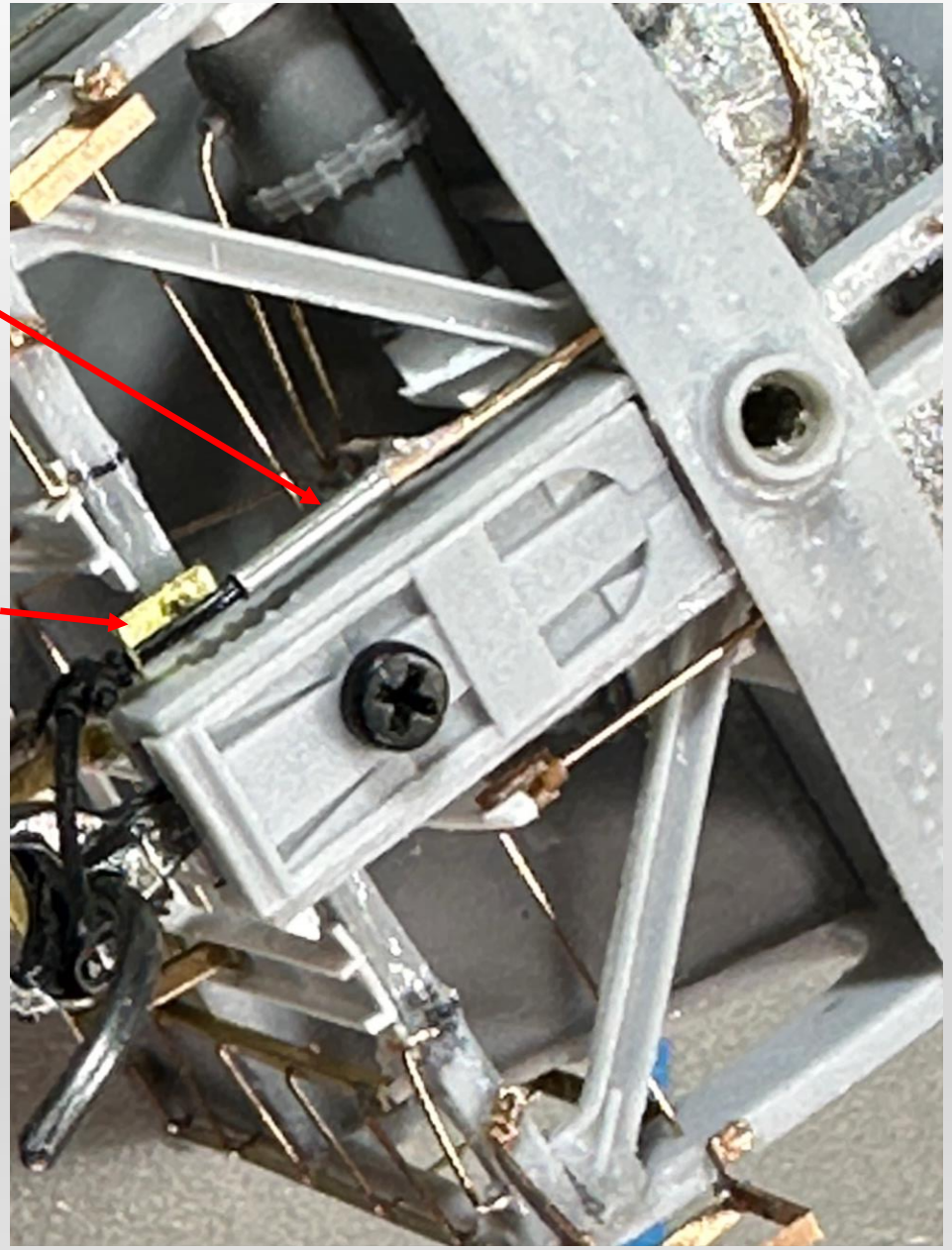




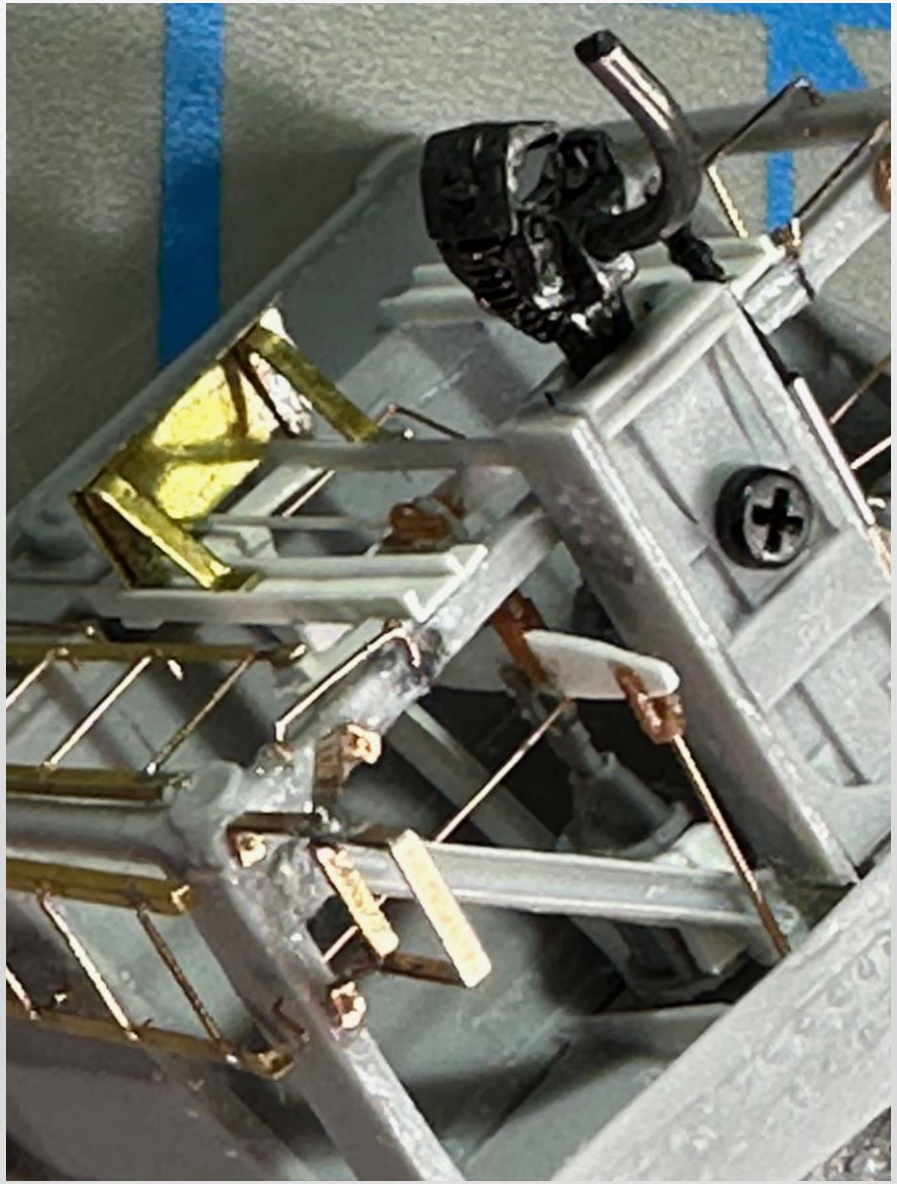
Micro SS Tubing used to connect Train line and Air Hose

Air Hose bracket made from .005 brass sheet

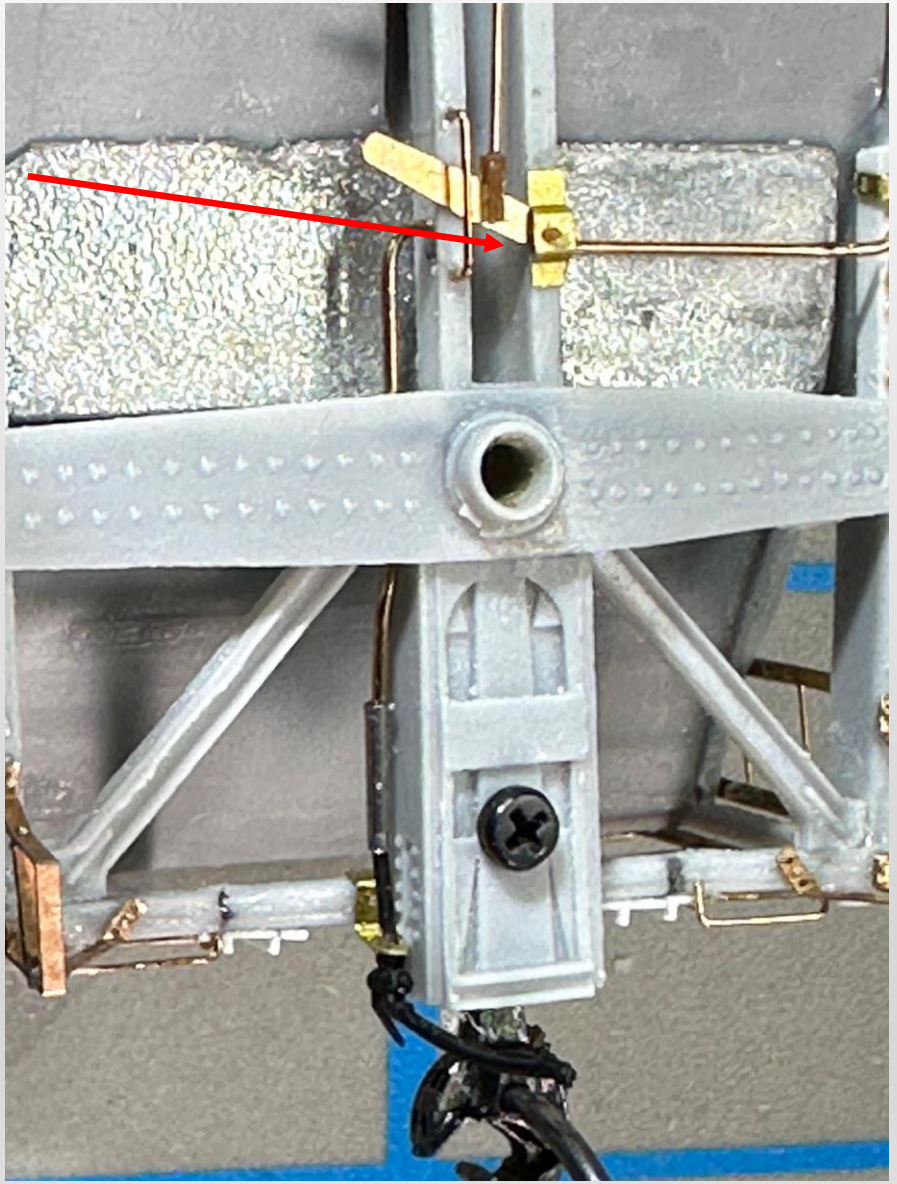
Moloco Rubber Air hoses



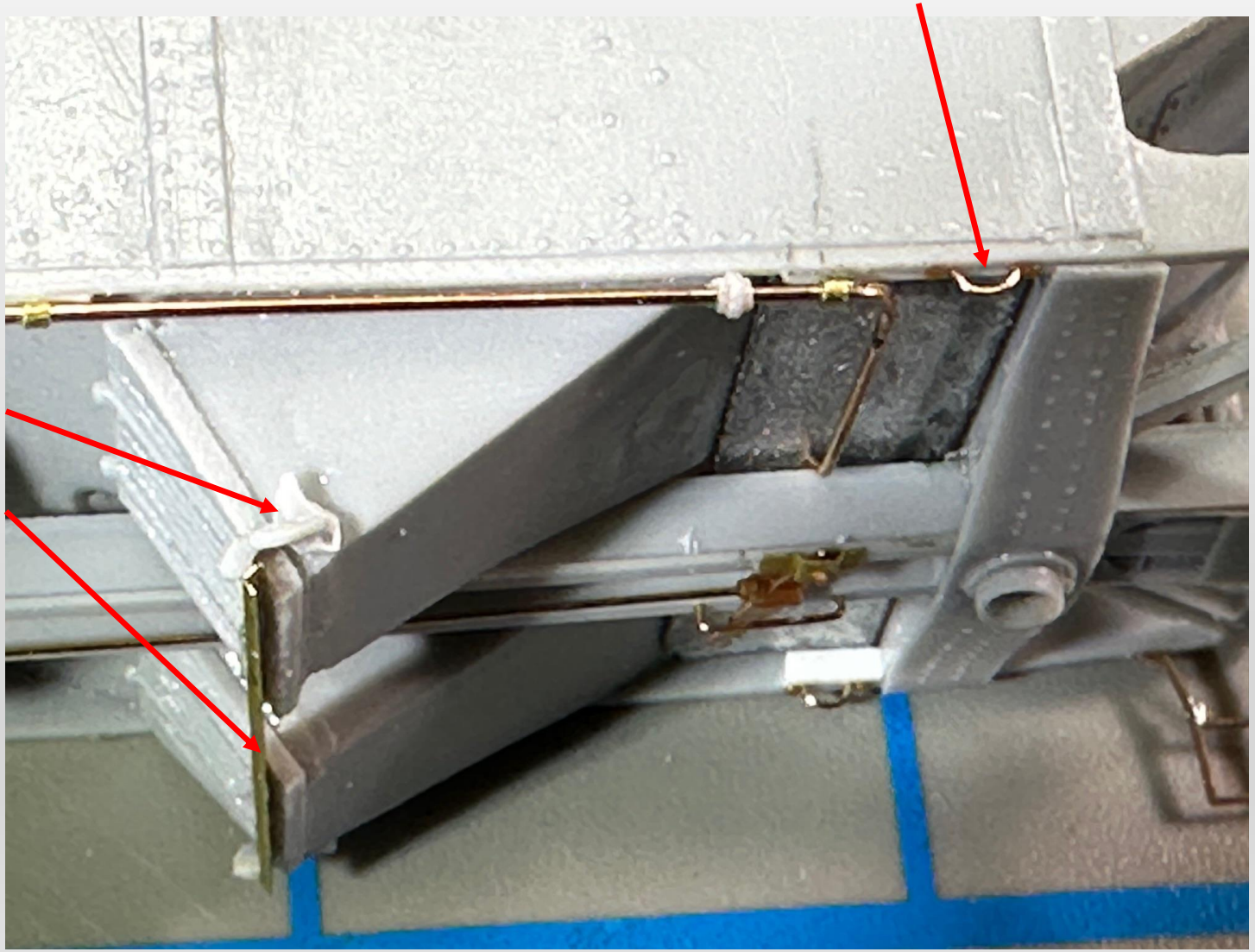
Detail View Brake lever



Dead Lever made from .003 brass

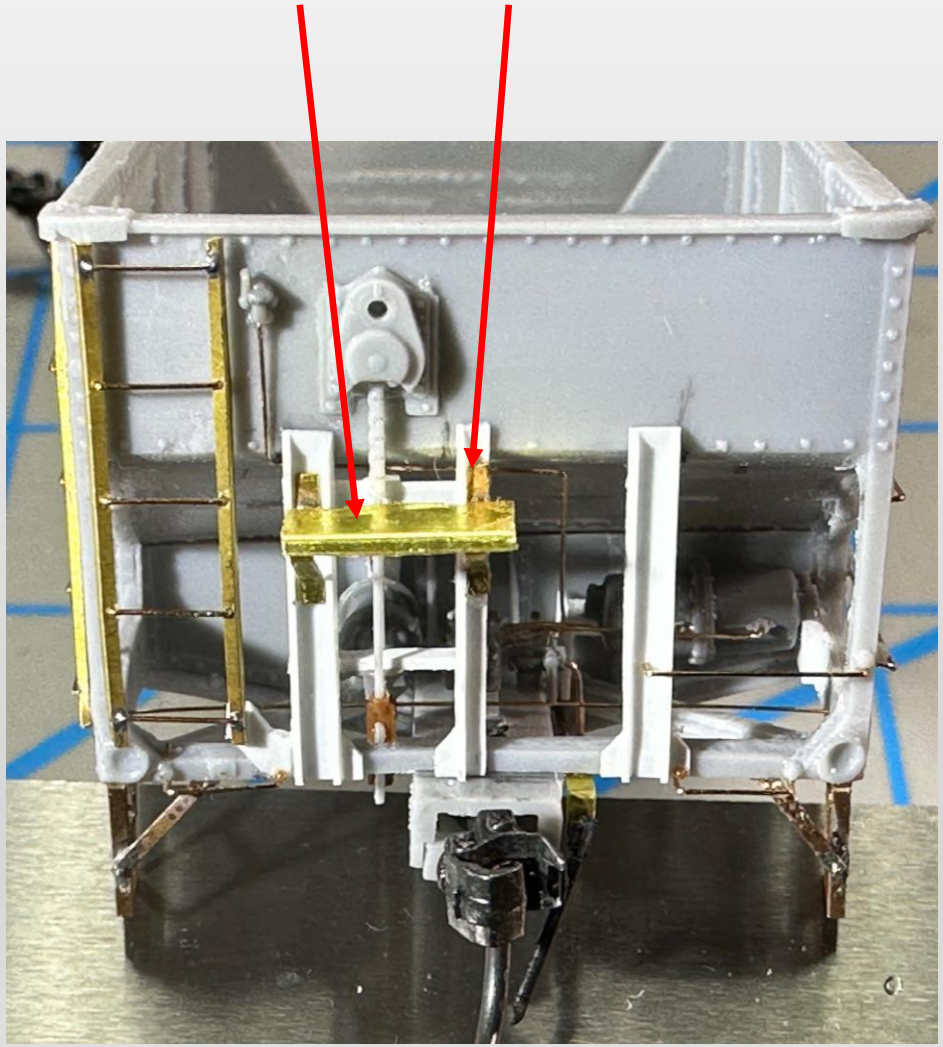


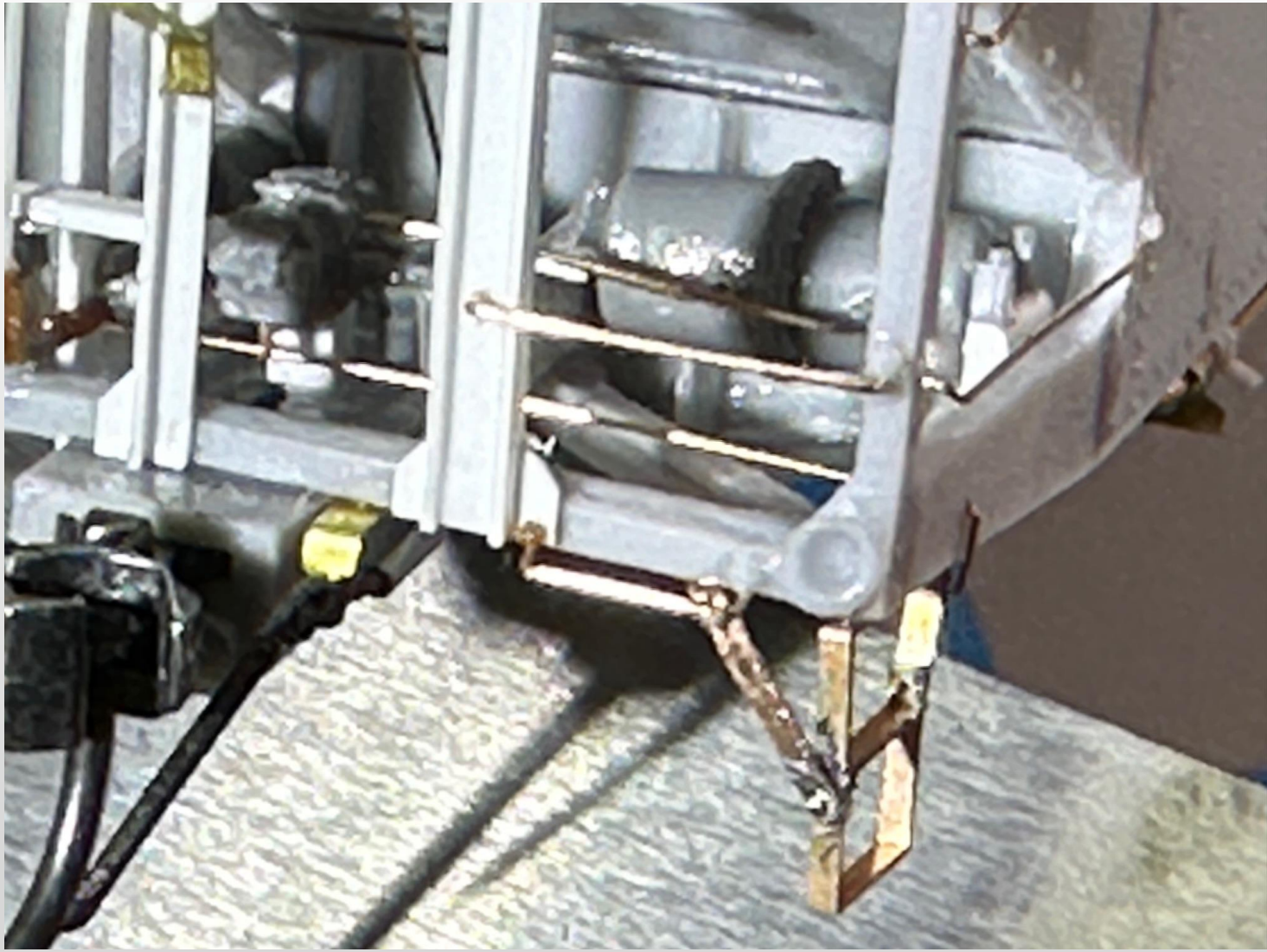
Towing Loops made from .0125 wire and Tichy .025 rivet heads



Miner Door hardware with a .004 brass Z bar cut and bent to shape replaced provided resin part

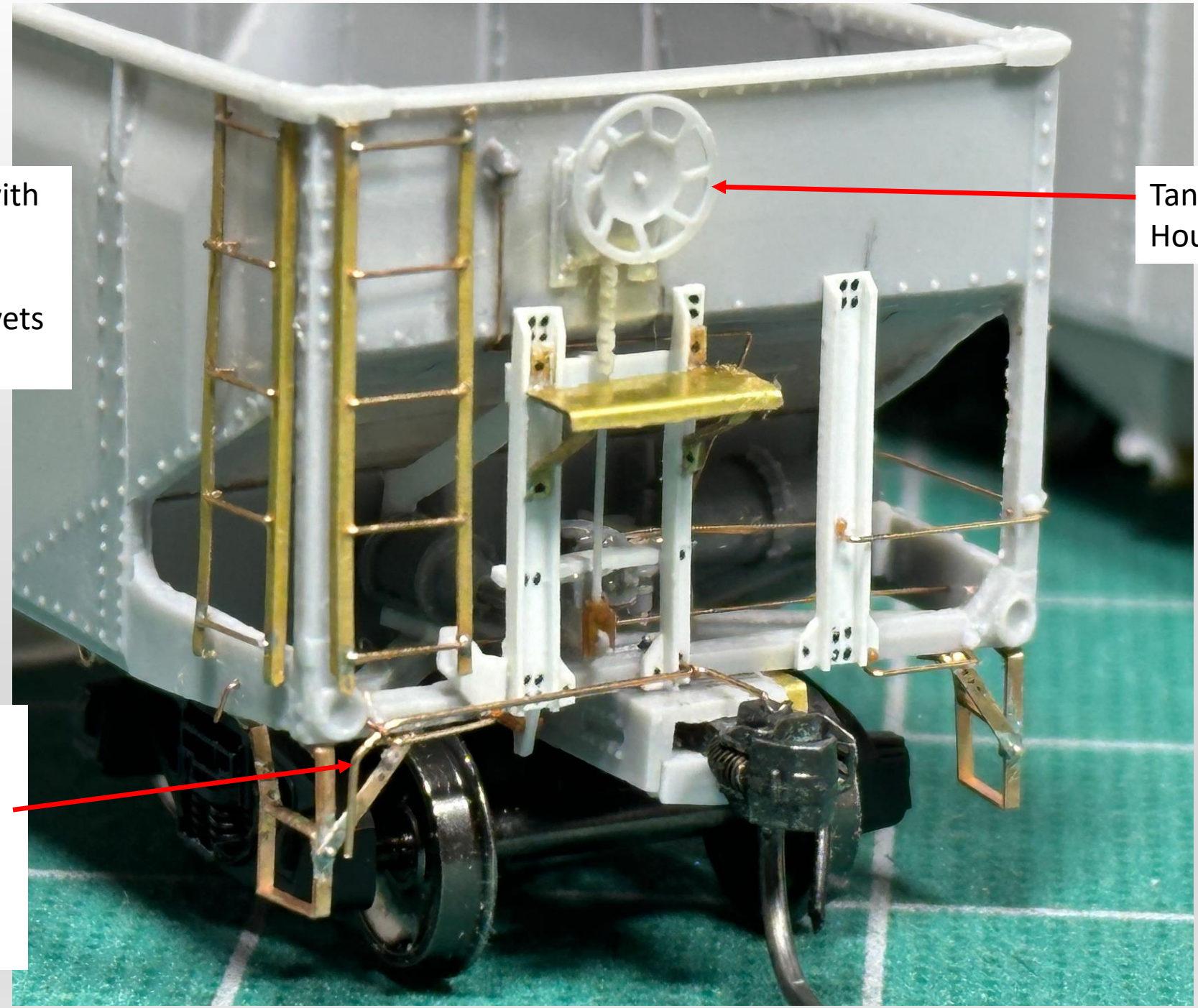
Brake step cut from .005 brass sheet and supports formed from .005x.030 brass and bent to shape and soldered to step.





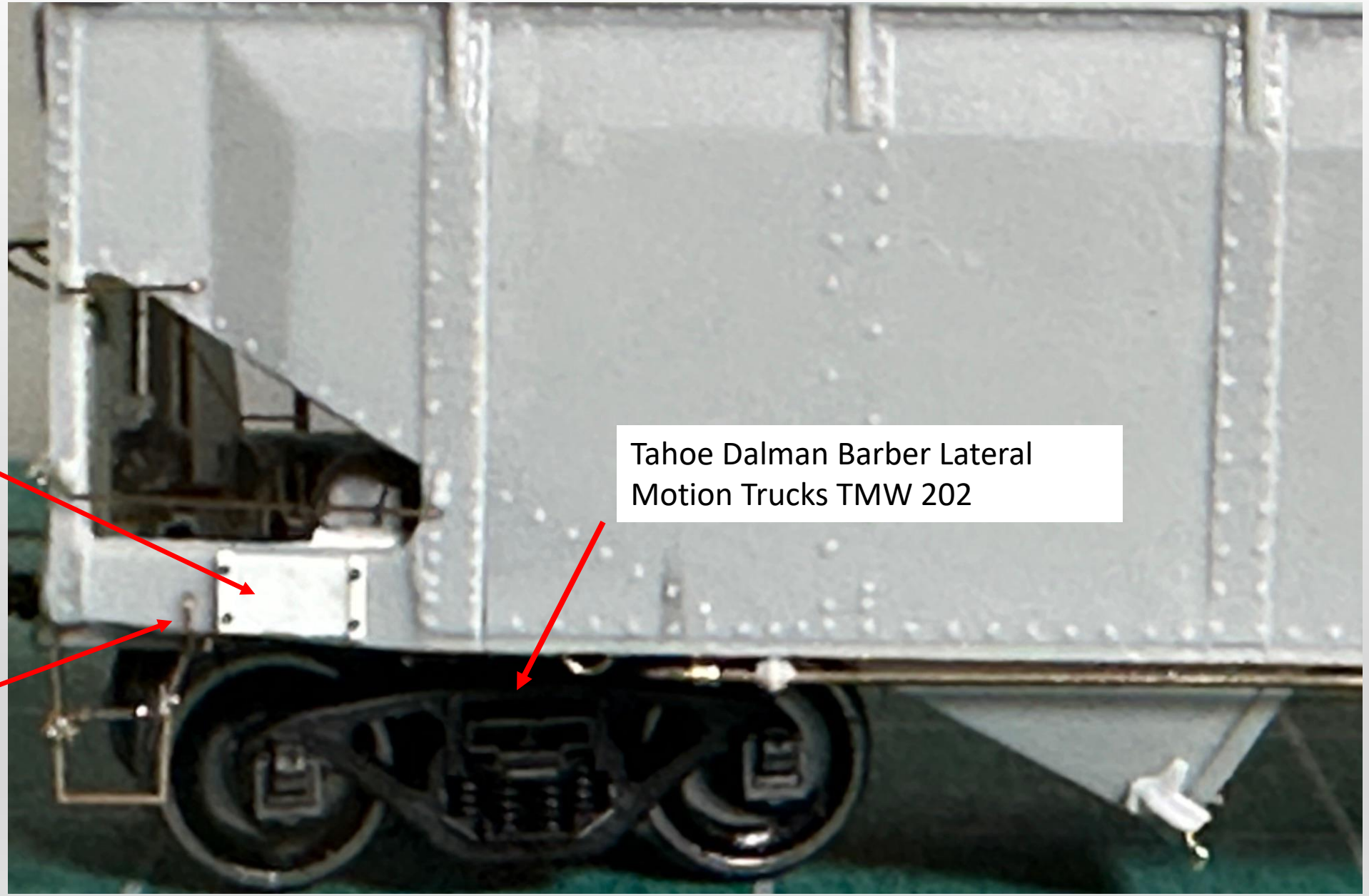
Detail of AB Brake and Yarmouth Stirrup steps

B End view with Archer and Athearn Harvested rivets Rivets

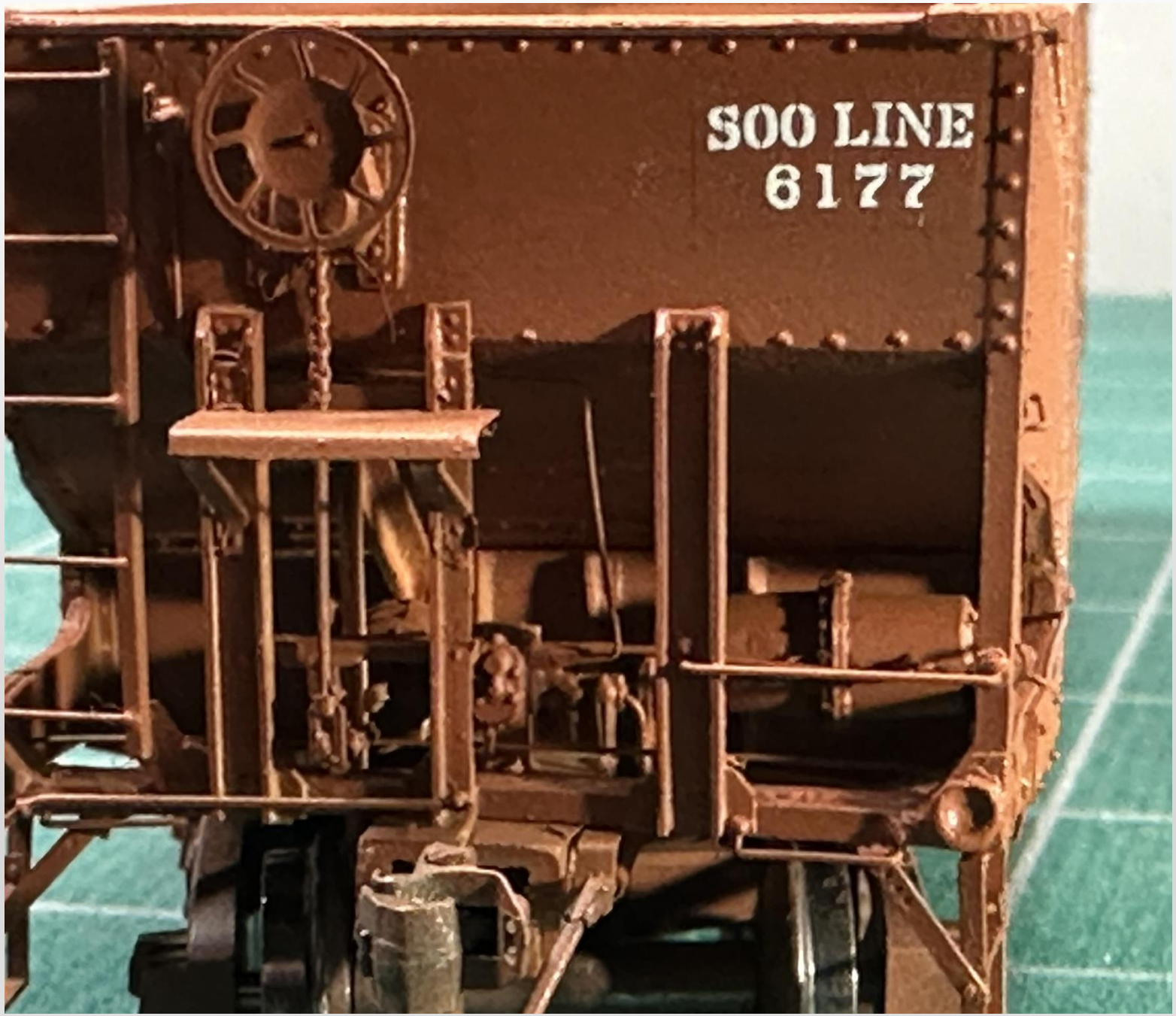


Tangent Miner Brake Housing and Wheel

Cut Lever formed from .0125 wire and mounted with Yarmouth PE eyelets

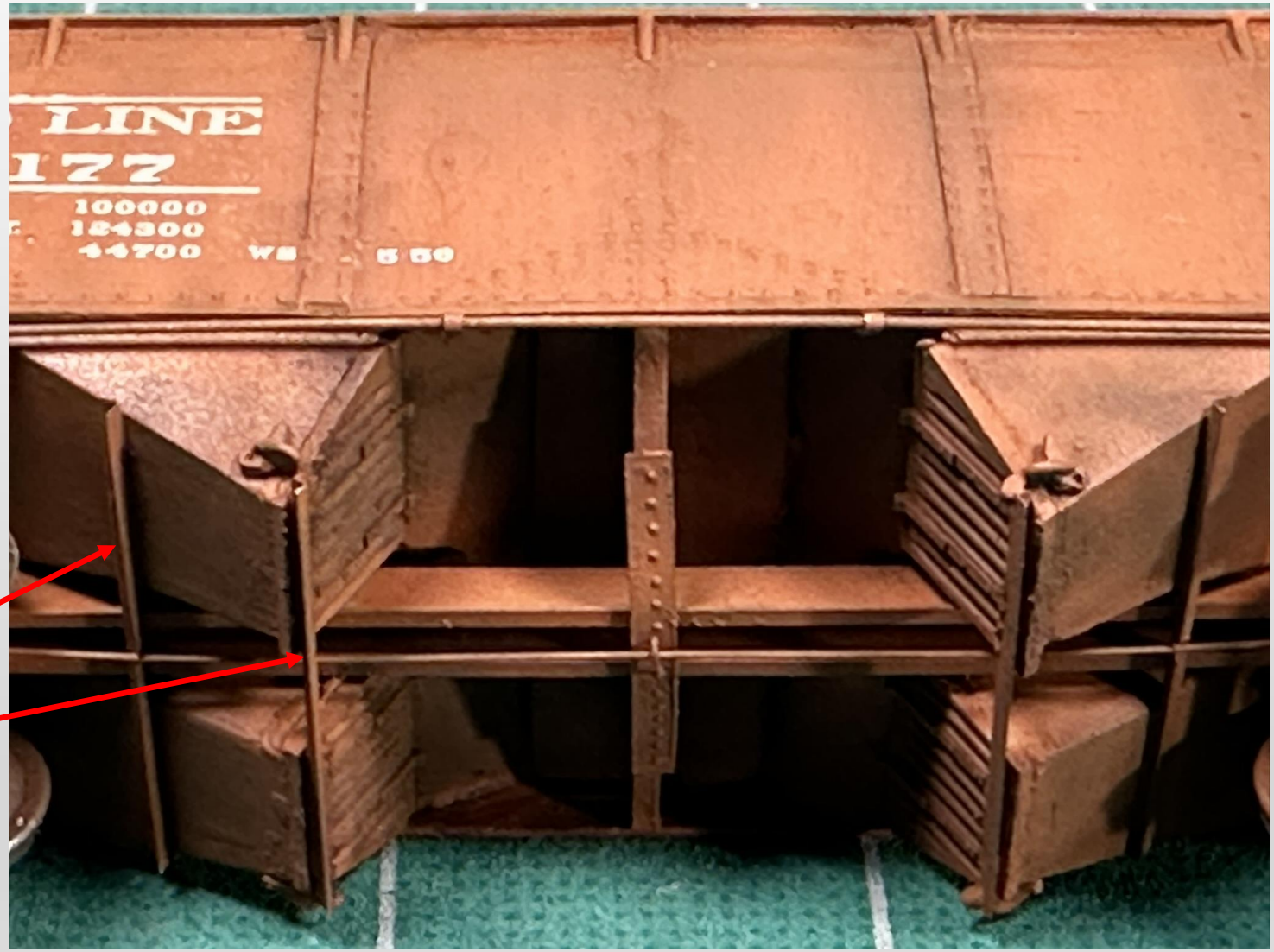

Styrene Tack Board made from scrap with Aathearn Harvested Rivets
.008 Release Rod
Tahoe Dalman Barber Lateral Motion Trucks TMW 202

B end
painted with
decals



¾ View Painted with decals

Closeup of Doors and Miner Hardware



Note Resin Kit Parts for the Z Bars on the hopper doors and bottom of slope sheet were substituted with custom cut and bent to Z from .004 brass.

Weathered
with air brush
and Pan Pastels

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