



Instructions: PRR Samuel Rea Shops G41A Coil Steel Gondola Kit



Tangent Part Numbers: 27000-01, 27001-01 & 27002-01

12/2022

Thank you for purchasing a Tangent Scale Models PRR Samuel Rea Shops G41 Coil Steel Gondola Car Kit! A few quick notes before starting:

- **Instructions have many large images:** Because some model builders are visually oriented, while others prefer written instructions, we have included *both* text and photos within these instructions. As you can see, many of the images are rather large, to aid in your model building.
- **There are more images at the end:** If you want to see more views of a completed model as a reference for your building, scroll to the end of this document. This is another advantage of a "digital download" over a printed instruction sheet.
- **Modeling from computer screen is ideal:** If possible we recommend modeling from your monitor. You can then enlarge the images as you see fit, and you save ink and paper at the same time.
- **There are several ways to complete your kit:** While there are multiple sequence steps possible to build this car, we believe the sequence included here yields the best results.
- **Prototype photos:** While you likely have your own sources of prototype photos, please recall that for each RTR scheme that Tangent releases, we include a

prototype photo on our website. You can use these as references in addition to your own sources.

- **We want feedback:** If you find something missing from our text instructions, or an error within these instructions, please let us know by submitting a comment to us on our website or sending an email to support@tangentscalemodels.com. Thank you!
- **This kit is meant for adults:** While we applaud bringing younger modelers into our hobby, this model includes many small parts, some of which are sharp and/or delicate. Therefore, this kit is recommended for those 14 years of age and older.
- **We offer semi-scale wheels separately:** We offer semi-scale wheels separately in 12 or 100 axle packs – in either 33", 36" and 38" diameters - to fit all of our trucks – and those from other brands!



Overview of this kit's contents:



Standalone parts included:

- Part 1 – Car Body and Trucks
- Part 2 – Hoods

Parts bags included:

- Bag #3 contains all small plastic parts
- Bag #4 contains all large plastic parts
- Bag #5 contains all wire parts

Parts needed/recommended:

- Couplers. Our draft sills are designed for Kadee “whisker” shank couplers - #158.

Tools needed/recommended:

- Liquid styrene cement
- CA-type cement or cyanpoxy – for wire to plastic joins
- Hobby knives - #11 and #17 are ideal
- #78/#79 drill bit in a pin vise is useful, although a #11 blade can be used gingerly
- Small Phillips head screwdrivers
- Tweezers

PREAMBLE – THINGS YOU SHOULD KNOW

- **This kit is NOT recommended for children aged 14 and under.**
- **Fragile Parts:** In the small plastic parts bag there are two very small and fragile parts, the brakewheel release lever and the retainer valve. Be sure to be very careful when emptying the parts bag that these parts do not get lost
- **Wire Parts:** In the wire parts bag there are eight very short pieces of wire that look like scrap from the manufacturing process. These are in fact the locating pins for the hoods, so again when emptying the wire parts bag be very careful not to misplace any of these parts
- **Small parts:** there are many very small parts included in this kit. The assembly sequence requires you to have several bags open at a time, so we recommend a clean and open work surface so that you can keep all of the parts in the open and accessible. Let's get started!
- **Kit variations:** Each kit comes with the appropriate parts for the era kit you are building. Research your prototype to determine which parts included are appropriate. If you want to change the configuration of your kit, you can order all our parts at www.tangentscalemodels.com.

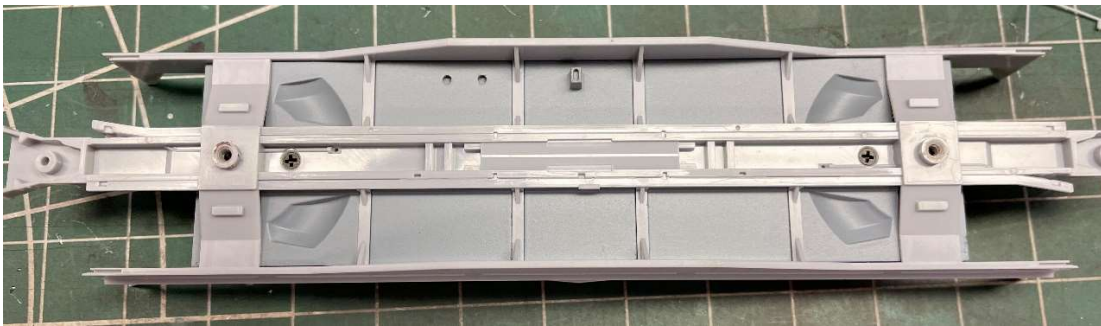
There is no set assembly sequence when building this kit. The assembly process consists of two subassemblies - the body and the hoods. We will start with the car body. The order in which you assemble each one is entirely up to you, but we recommend building the kit in the order described here. Now, let's get started!

Underframe Assembly:

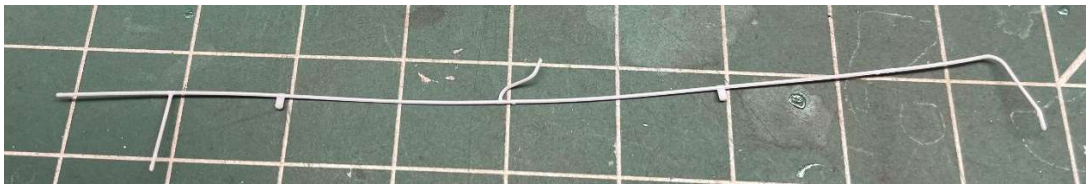
1. **Preambly:** Remove the trucks to make it easier to access the underframe of the car. Set them off to the side until later.

The easiest way to proceed is to empty the contents of the small parts bag onto your work surface, being careful to keep track of all of the individual parts. Also, remove the two train line parts from the larger parts bag.

Begin by placing the car face down on your work surface (the bottom of the car facing up) and orient it so that the B end of the car is on your left. There are two holes in the floor for the reservoir that are located close to the side of the car. The B end is closest to these holes so they should be on your left (see photo)



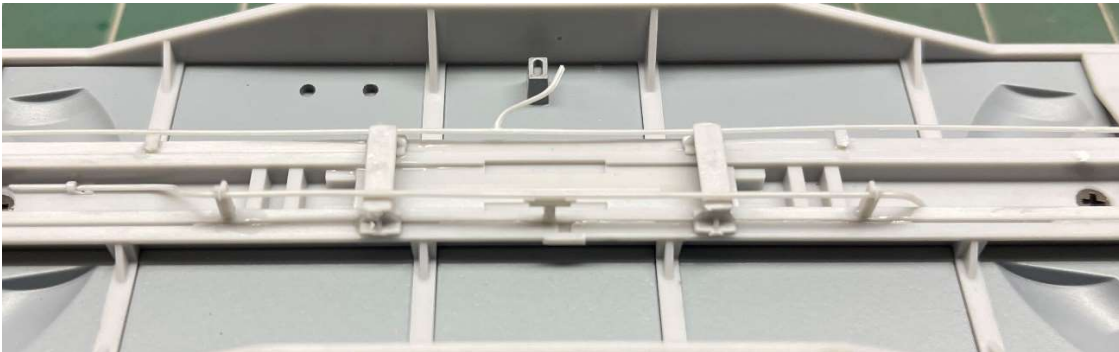
2. **Install Train Lines:** Position the longer train line so that the 90-degree bend is toward the right. The casting has tabs that fit into holes in the center sill to aid in locating. Set in place and secure. It may not be straight but when other parts are added later it will straighten itself out.



3. The shorter air line has one side that has a slight offset-this goes toward the B end. Put in position and glue in place.

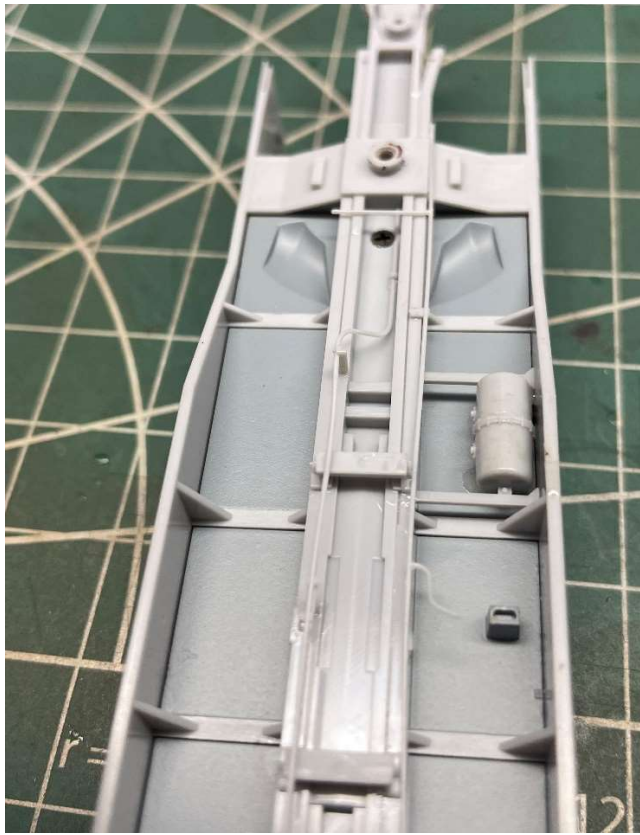


4. **Install Center Sill Cross Braces:** Locate the two center sill cross braces. They have small tabs that fit into slots in the center sill. Set these in place and glue. (after these are installed, the train lines should be now be straight)

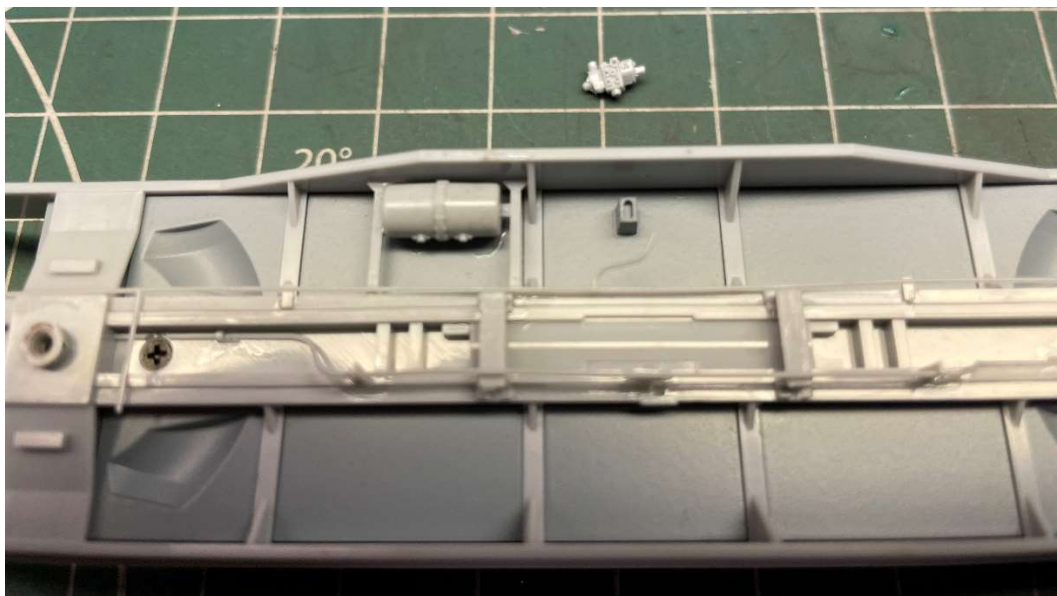


5. **Install Reservoir:** Locate the reservoir assembly. The two pins in the casting will fit in the holes in the floor, while the "legs" will rest against the center sill. Set in position and glue.

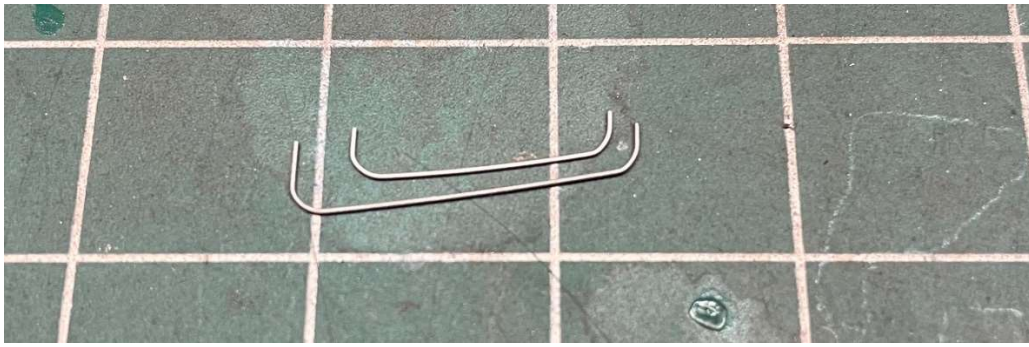




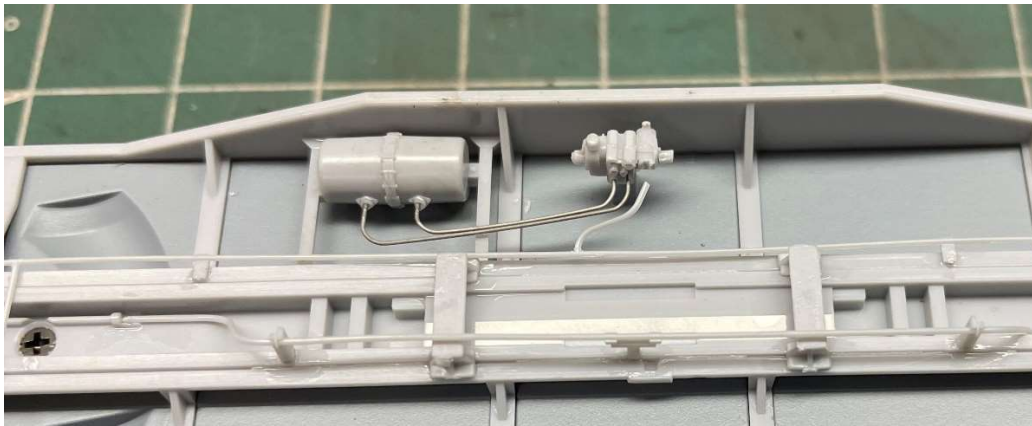
6. **Install AB Valve:** Locate the AB valve support bracket. It has a small tab on the back that fits into the slot in the mounting post next to the reservoir. The other end rests against the center sill. Set in place making sure that the end of the bracket that the AB valve sits on is horizontal. When satisfied with the positioning glue in place. Set the AB valve into the slot on the support bracket with the holes in the casting facing the center of the car. Glue in place.



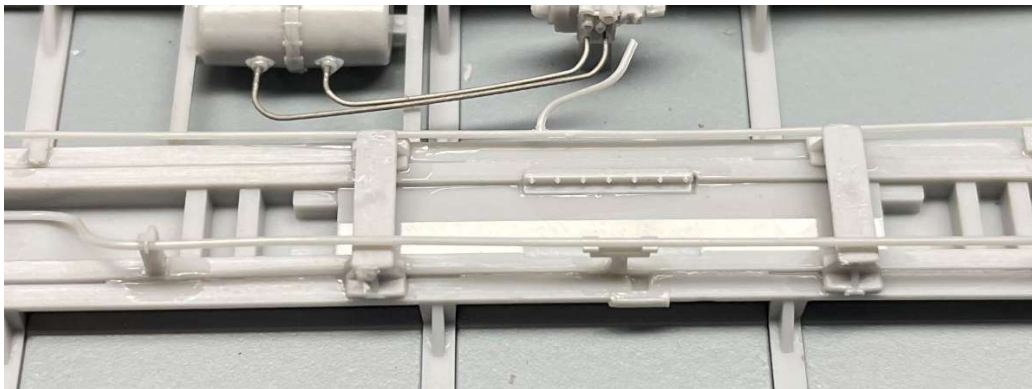
7. **Prep Wire Parts:** Open the wire parts bag and empty the contents on your work surface, again being careful not to lose any of the small cover locating pins.



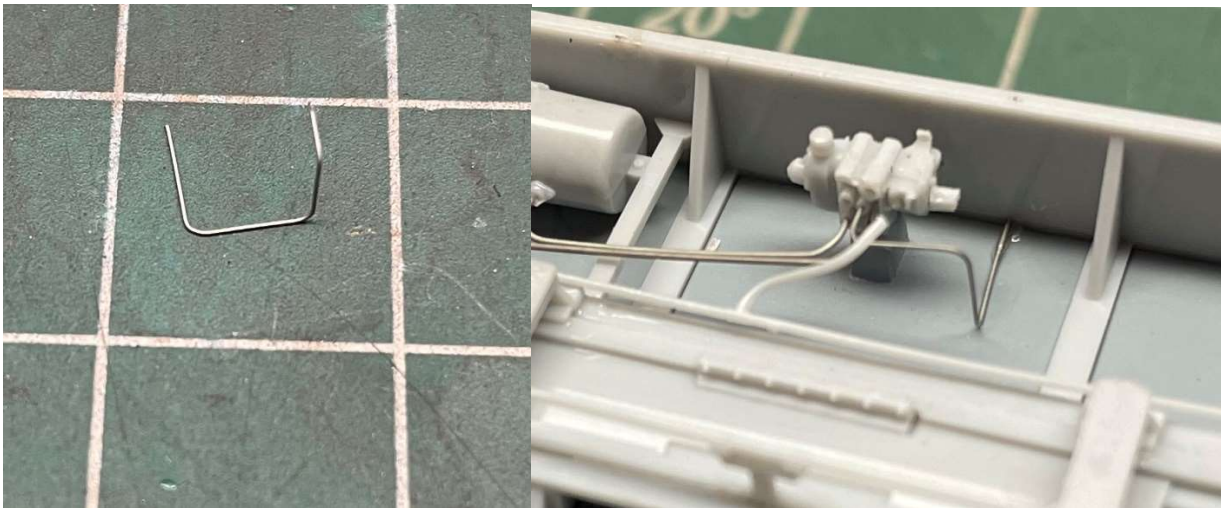
8. **Install Wire Air Lines:** There are two wires go from the reservoir to the bottom two openings of the AB valve (see photo). Set them into position and use CA to secure the wires in the reservoir but **do not put any glue at the AB valve yet** to ensure none of the other openings get blocked.



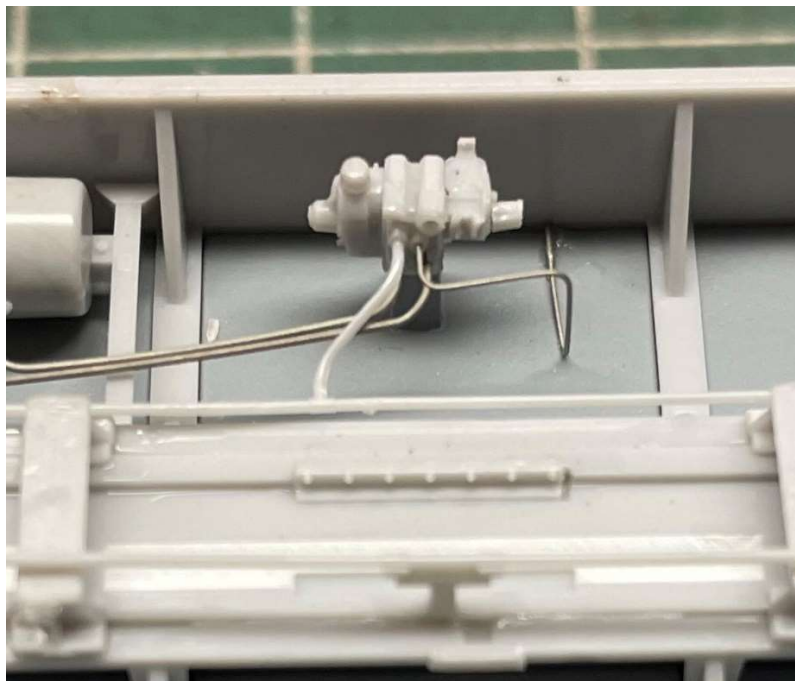
9. **Install L Brackets:** There are two L brackets that fit into slots on either side of the center sill. The bottom part of the L rests in the slot and faces the center of the car. Glue both parts in place.



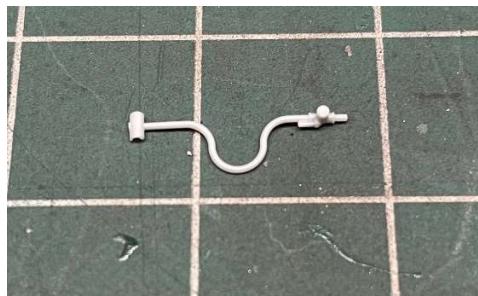
10. **Install Retainer Valve Line:** Locate the retainer valve wire (see photo). The short leg goes into the opening in the AB valve just above the right-hand reservoir wire and the long end rests on the floor in a small slot next to the car side. This part is a bit tricky to set in place so to make it a bit easier use a small bit of CA to tack the longer leg in place while you position the short leg in the AB valve. **Again, do not use any glue at the AB valve yet.**

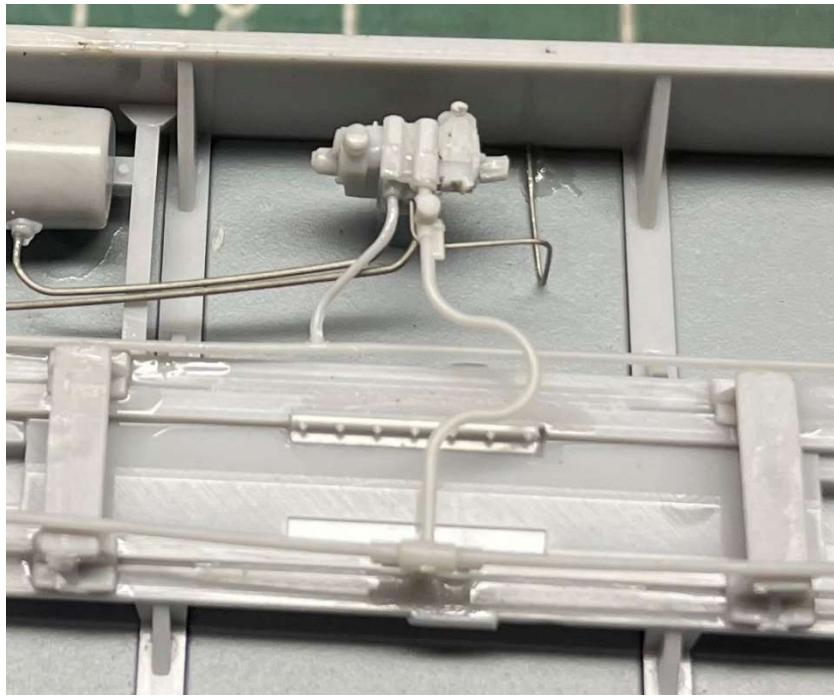


11. **Place Air Line/AB Valve Connection:** The short leg coming off the train line goes into the opening on the left hand side of the AB valve above the left reservoir wire. **Insert but do not glue.**



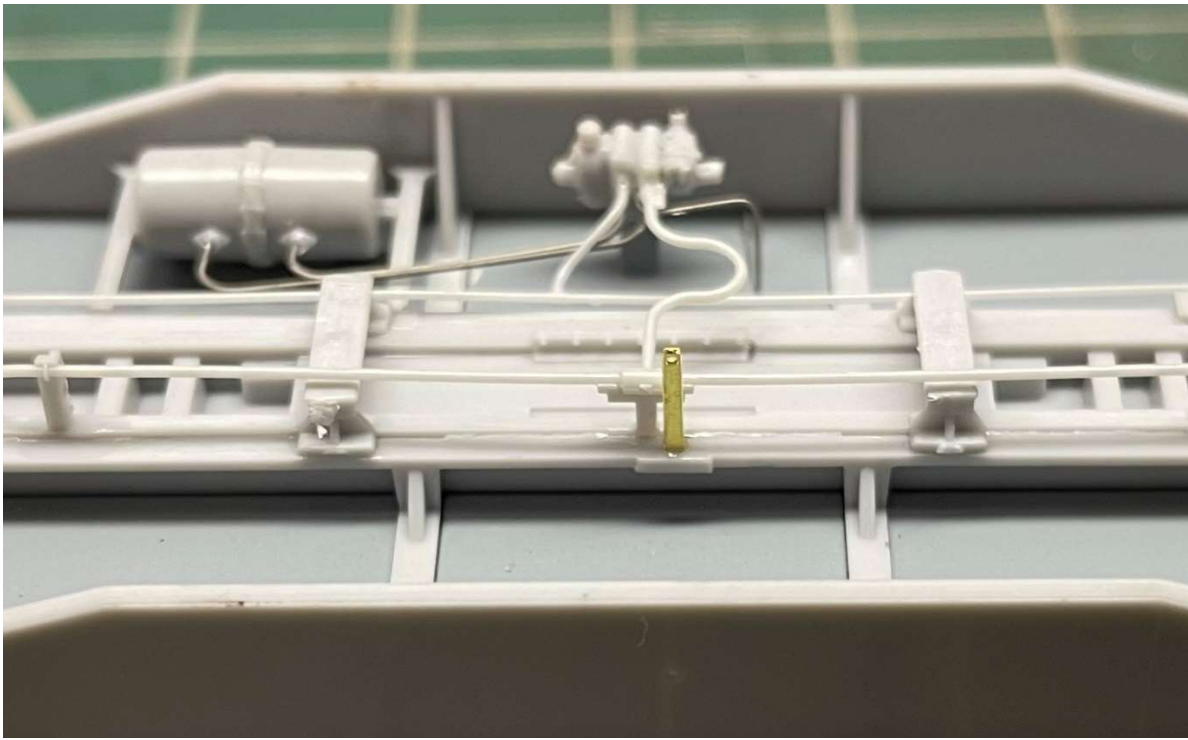
12. **Install Dirt Collector Pipe:** The dirt collector pipe (see photo) rests on the train line and fits into the last opening in the AB valve. Once this part is in place you can secure all parts in the AB valve.



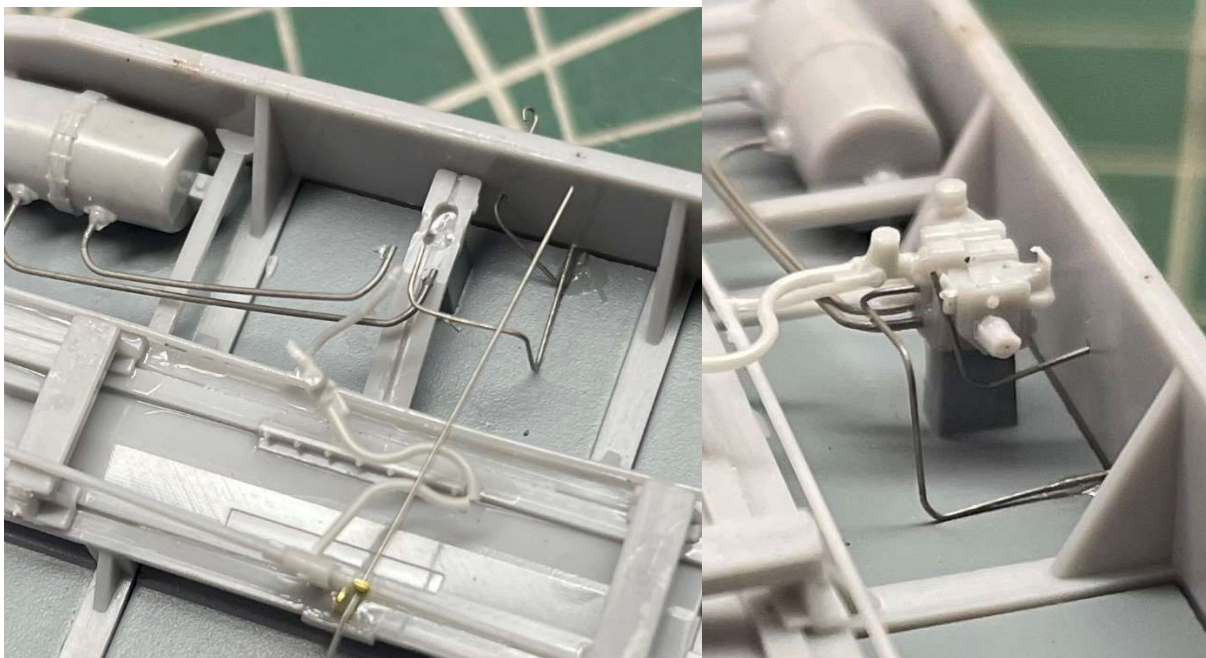


13. **Install Bleed Rod Assembly:** The bleed rod assembly has three parts- a long and short wire and a brass standoff. Locate the parts (see photo) and install the standoff in the slot in the center sill next to the support for the dirt collector pipe. Position it so the bottom of the L faces the center of the car. Secure with CA.

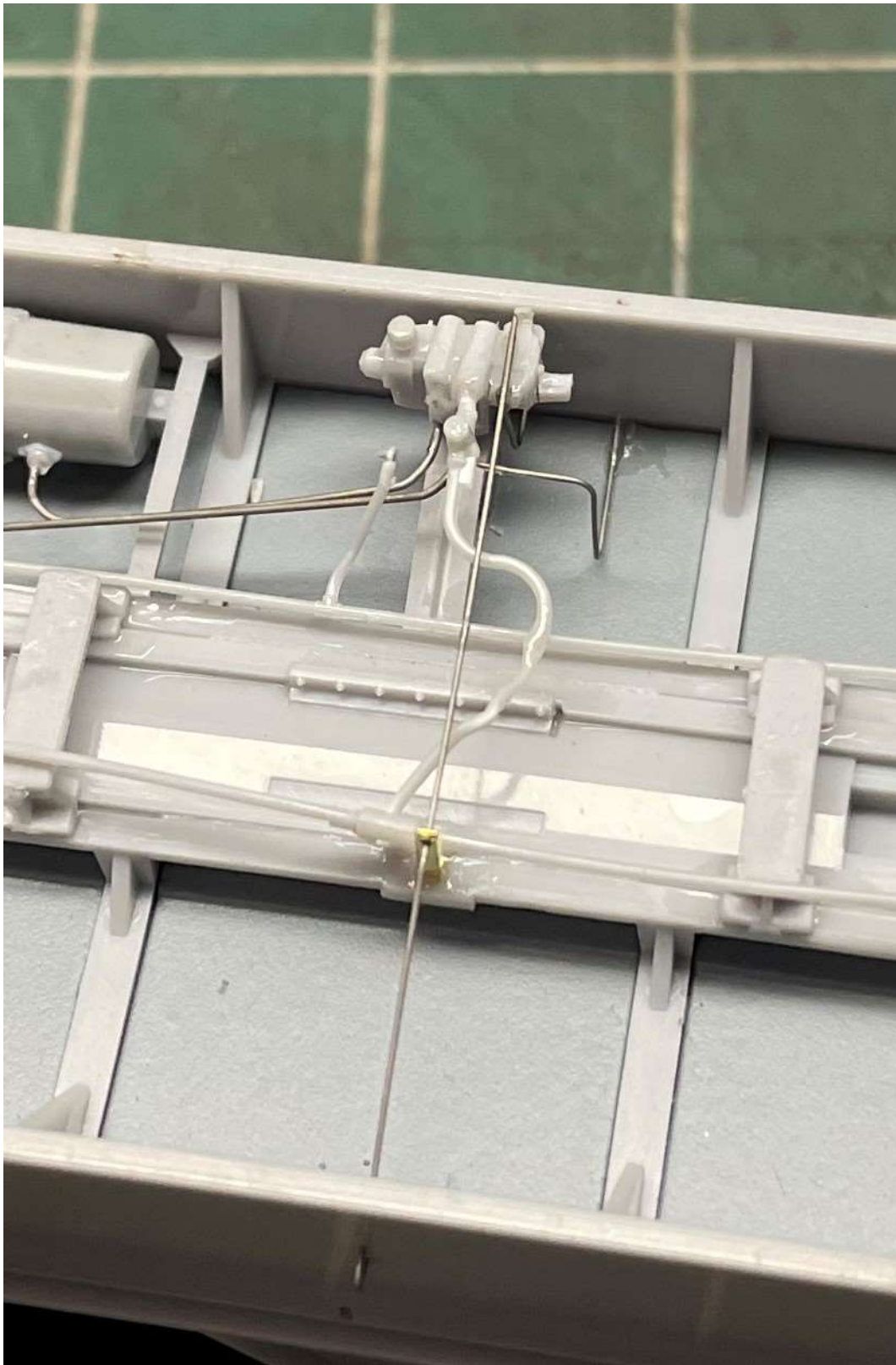




14. The short wire goes through a hole in the car side by the AB valve. From the outside, fish the non looped end through the hole and position it so that the leg is vertical and it sits in a slot on the AB valve (see photo). Secure to the AB valve with CA.



15. Fish the straight end of the longer wire through the hole in the other car side (again from the outside) and also through the hole in the brass standoff. It takes a bit of maneuvering but be patient and take your time. The end of the wire rests on top of the AB valve by the short wire. Set in place with CA.

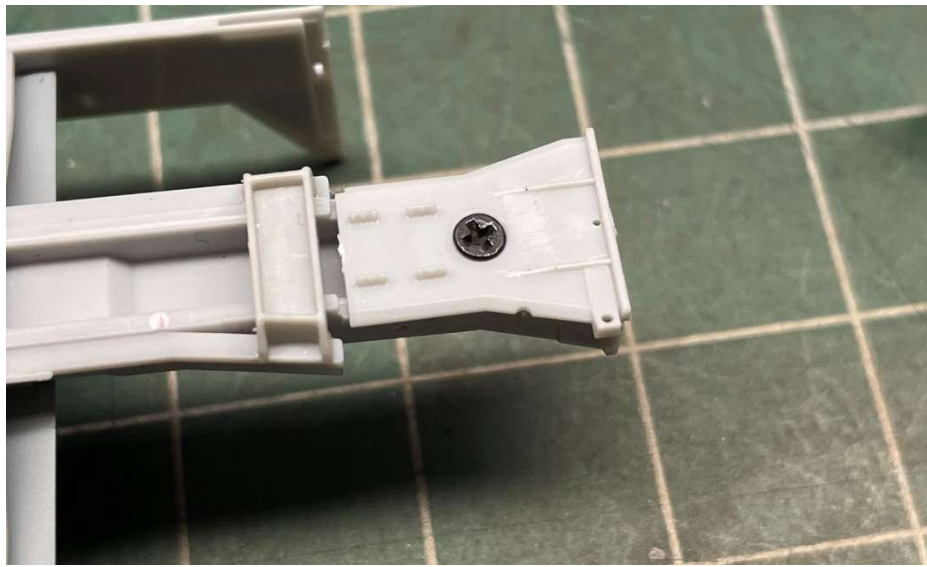


16. Install Coupler Cushion Guides: There are two cushion guides that fit at the back side of the coupler box. They also have two tabs that fit into slots in the center sill. They have a slightly trapezoidal shape and the longer side faces the ends of the car. Set in place and secure.

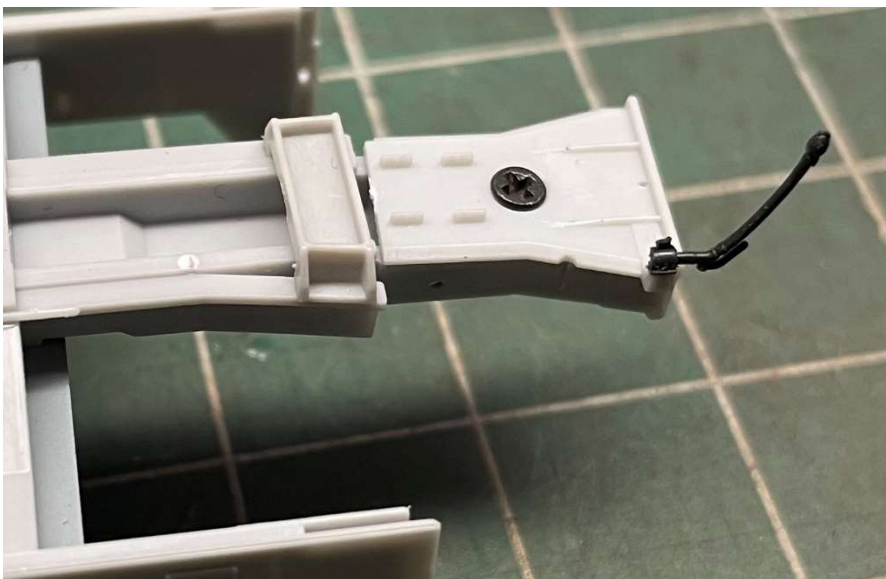


17. **Coupler Box Lids:** Locate the two coupler box lids and set in place with two small screws. As we have suggested in our other kit instructions we recommend waiting until after all paint and weathering has been completed before installing couplers to ensure proper operation. If you want to install couplers now, just be sure to cover them during painting





18. **Install Air Hoses:** Install the air hoses into the corner tabs on the coupler box lids. Secure with CA being careful not to glue the lid to the box

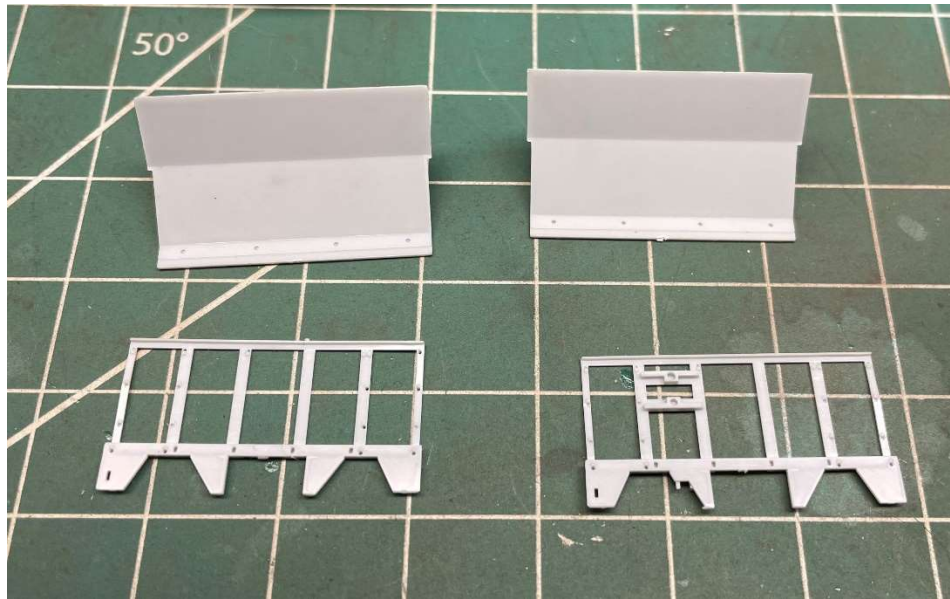


19. **Install Air Hose Pipes:** Locate the two air hose pipes. These parts have small pins that fit into holes in the side of the coupler box. The tail end fits in the slot between the coupler box and center sill. You may need to trim a little bit off the back end of the pipe so it fits properly. The other end of the pipe fits into the back side of the air hose. **If you haven't added couplers yet, do not glue the pipe to the air hose as you will need to be able to get the coupler box cover off.**

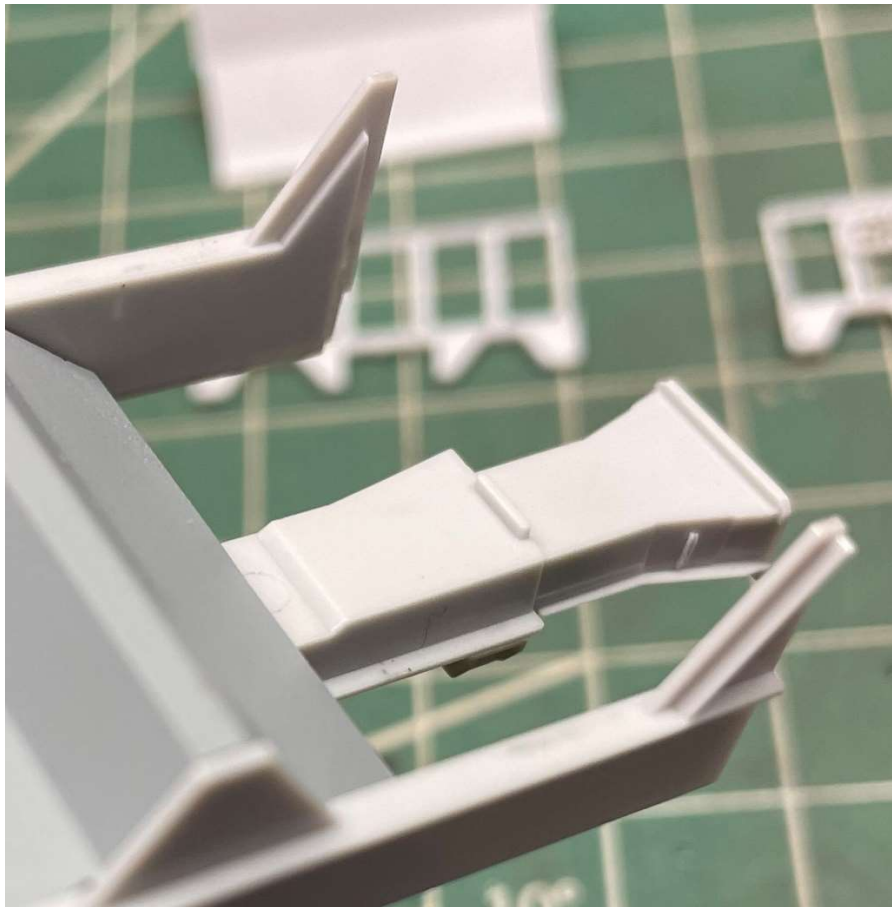


This completes the underframe assembly.

Body Assembly:

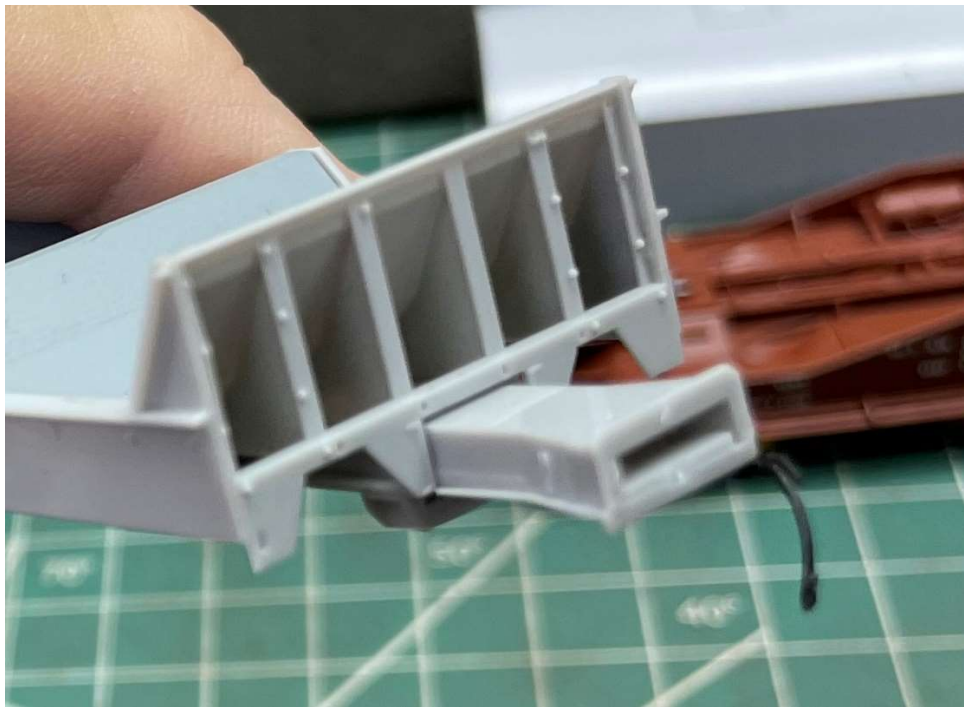


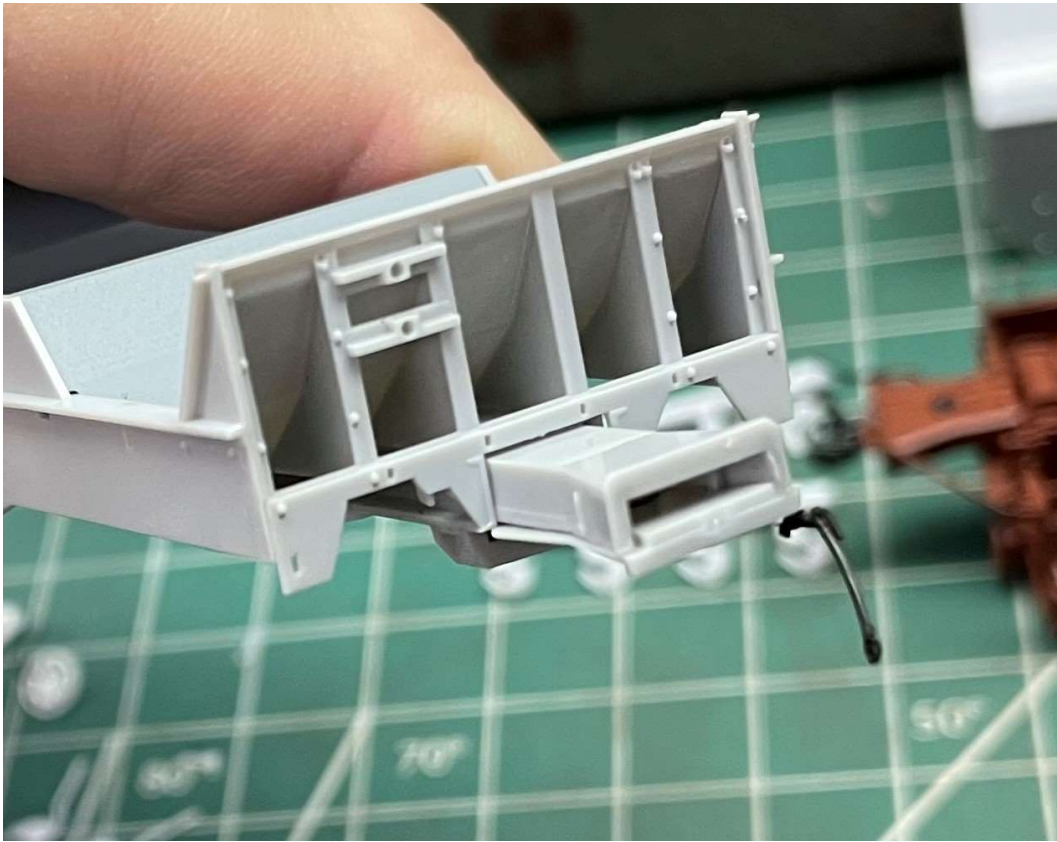
20. **Install End Slope Sheets:** The end slope sheets have a small lip on the lower end that fits underneath the floor. Position it under the floor and seat it until the two center supports rest on the center sill and the sides rest on the raised ridges of the car sides (see photos). Glue in place.





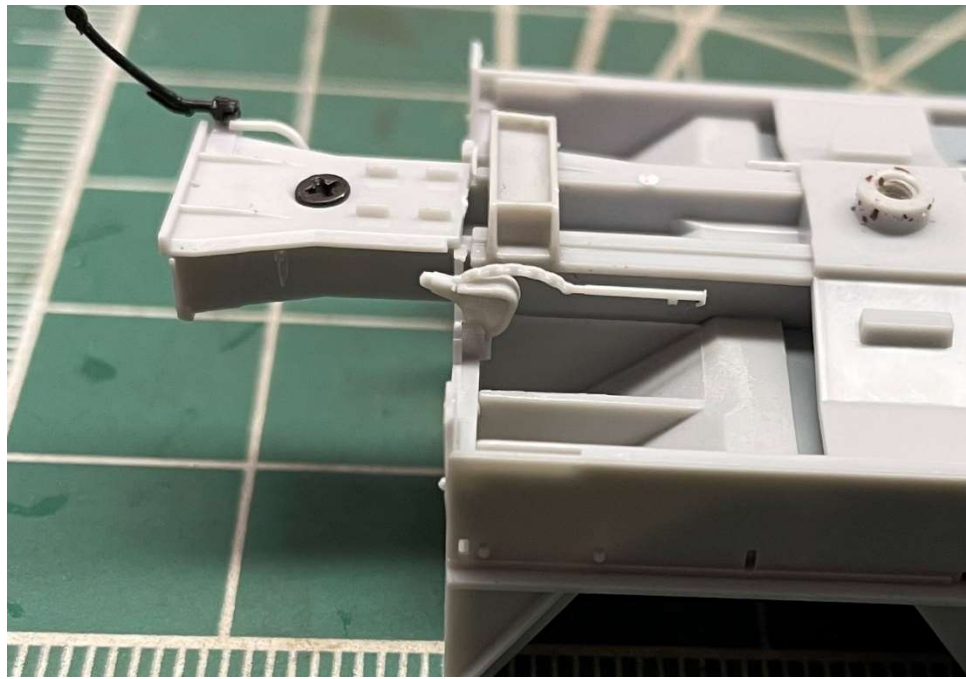
21. **Install End Cages:** There are two end cages, one for the A end and one for the B end. They sit inside the car sides and rest on the center sill and against the end slope sheet. Position each end and glue in place, making sure you put the right cage on the right end of the car. (the B end is the one closest to the reservoir).





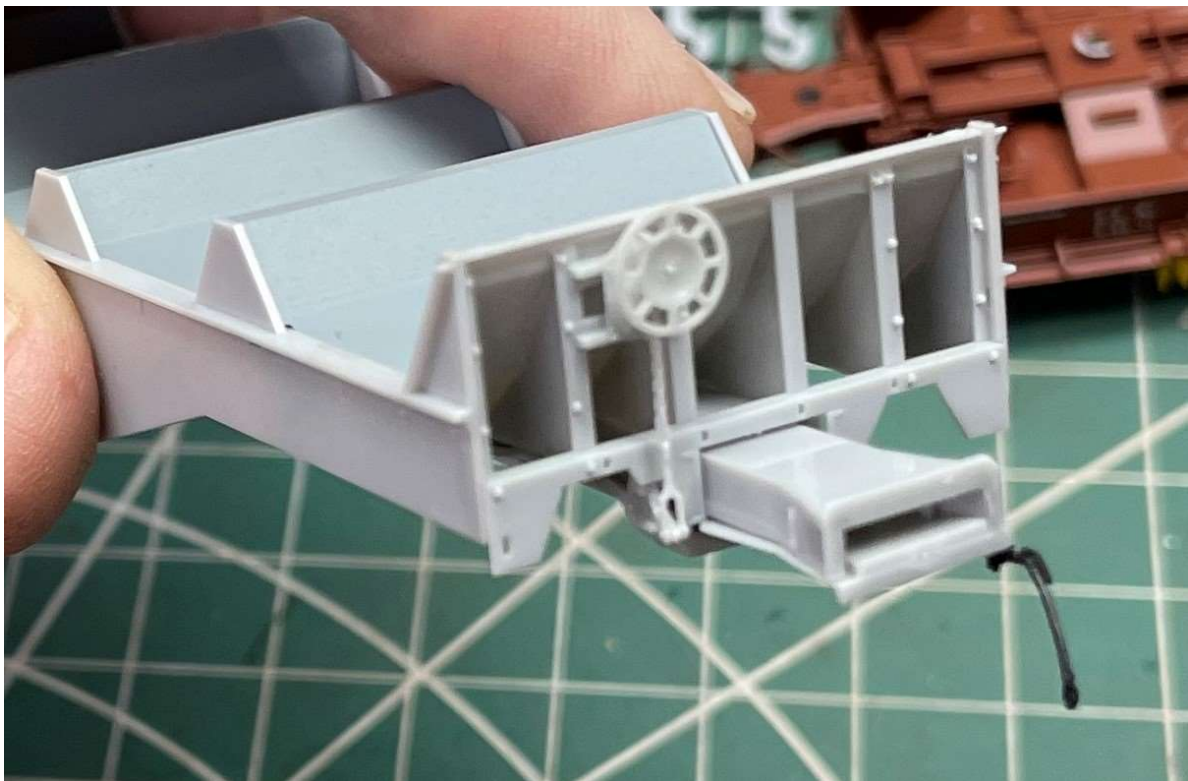
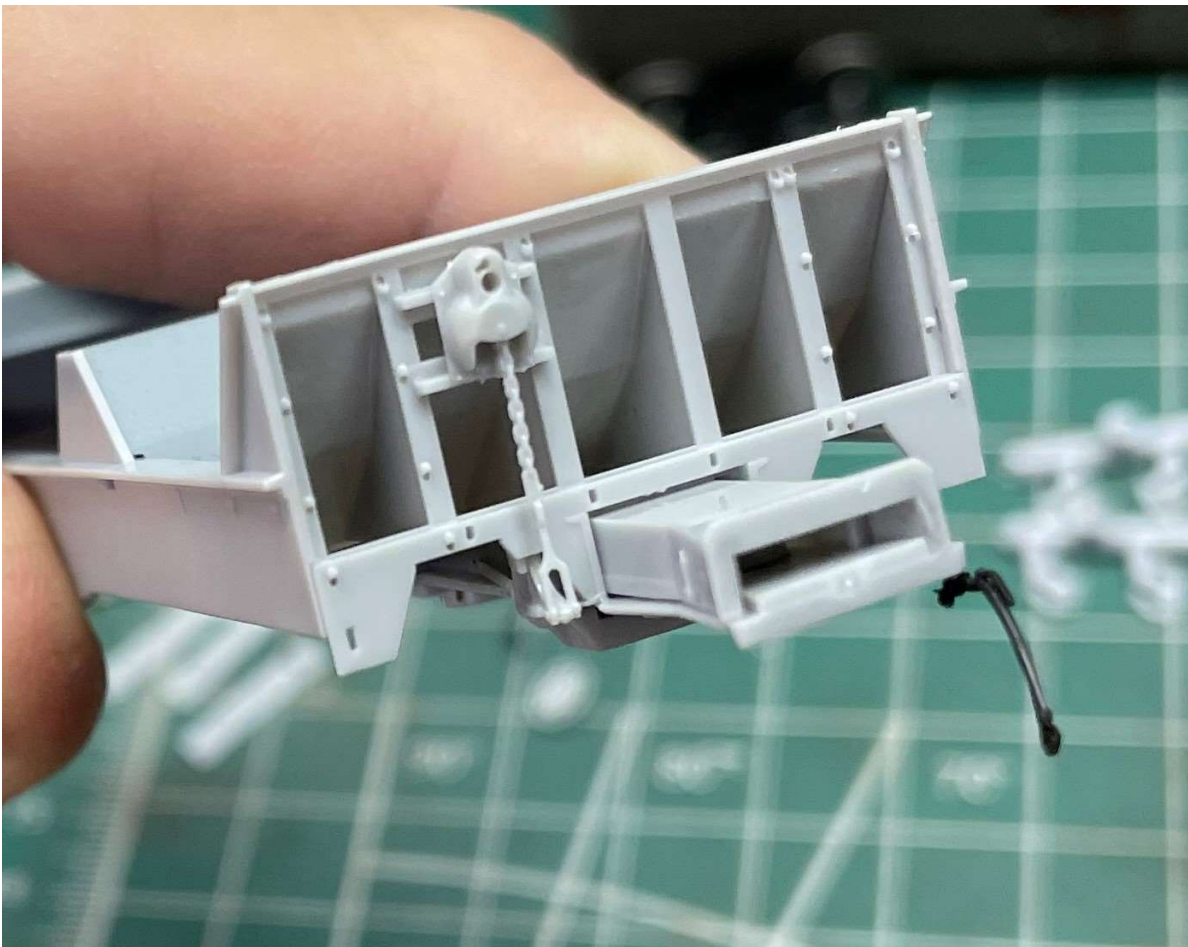
22. **Install Fulcrum:** On the B end, there is a small slot in the bottom of the end cage. This is for the fulcrum. Position the fulcrum by inserting the tab into the slot and glue in place.



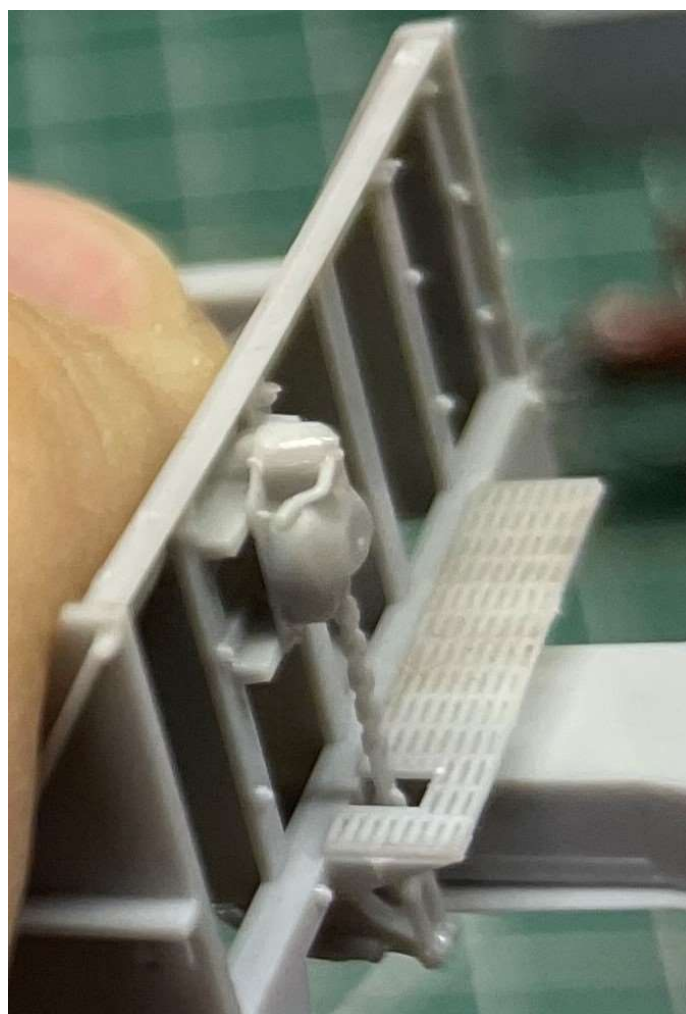


23. **Install Brakewheel Housing and Brakewheel:** The brakewheel housing and chain fits into the two holes in the end cage, with the clevis end fitting over the end of the fulcrum. Position and glue.

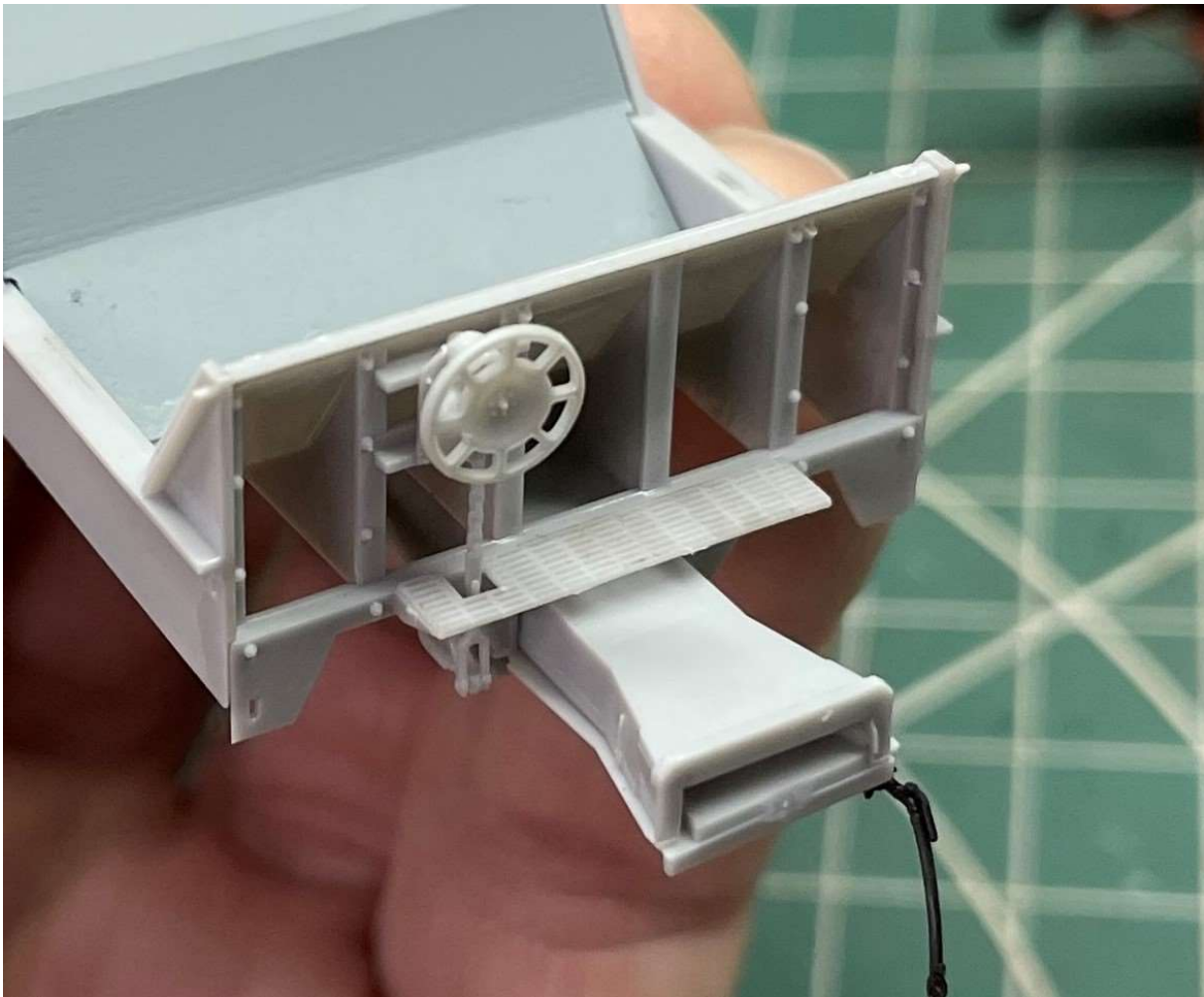
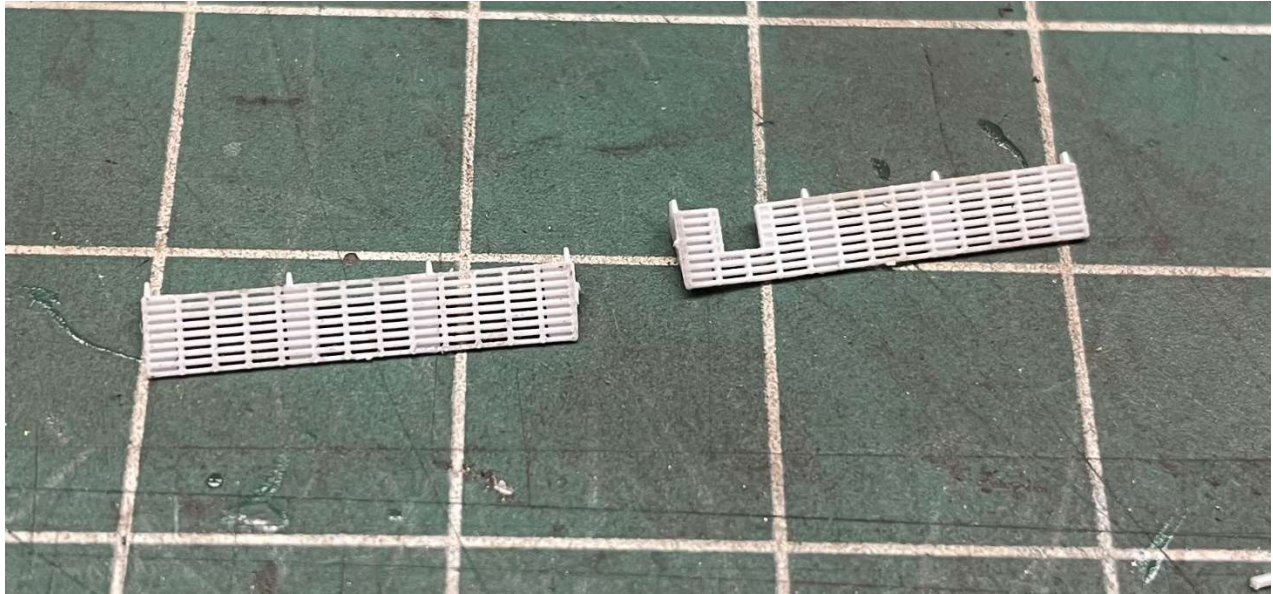




24. Locate the brakewheel release lever. This is one of the very small parts from the parts bag. There is a small opening above the hole for the brakewheel that this part fits in. Glue in place, then install and glue the brakewheel.



25. **Install Crossover Platforms.** There are two different types of crossover platform, Morton and Apex. Select which is appropriate for your prototype. The one for the B end has a notch that goes over the brake staff, and there are mounting holes for positioning. Glue both sides in place.

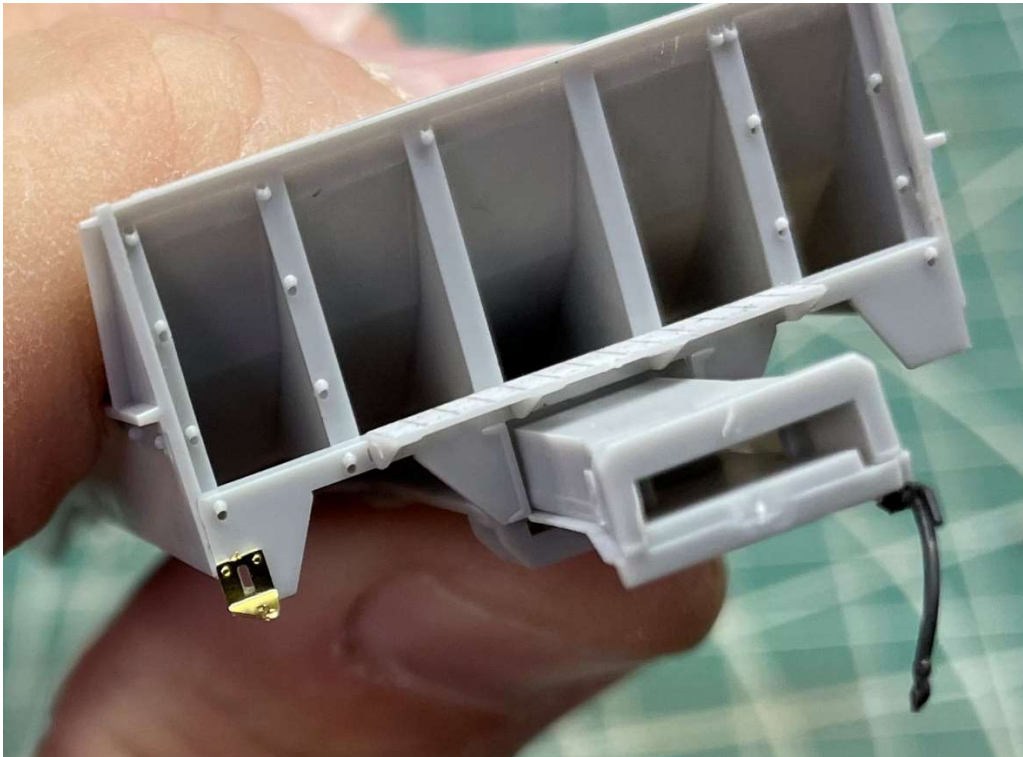


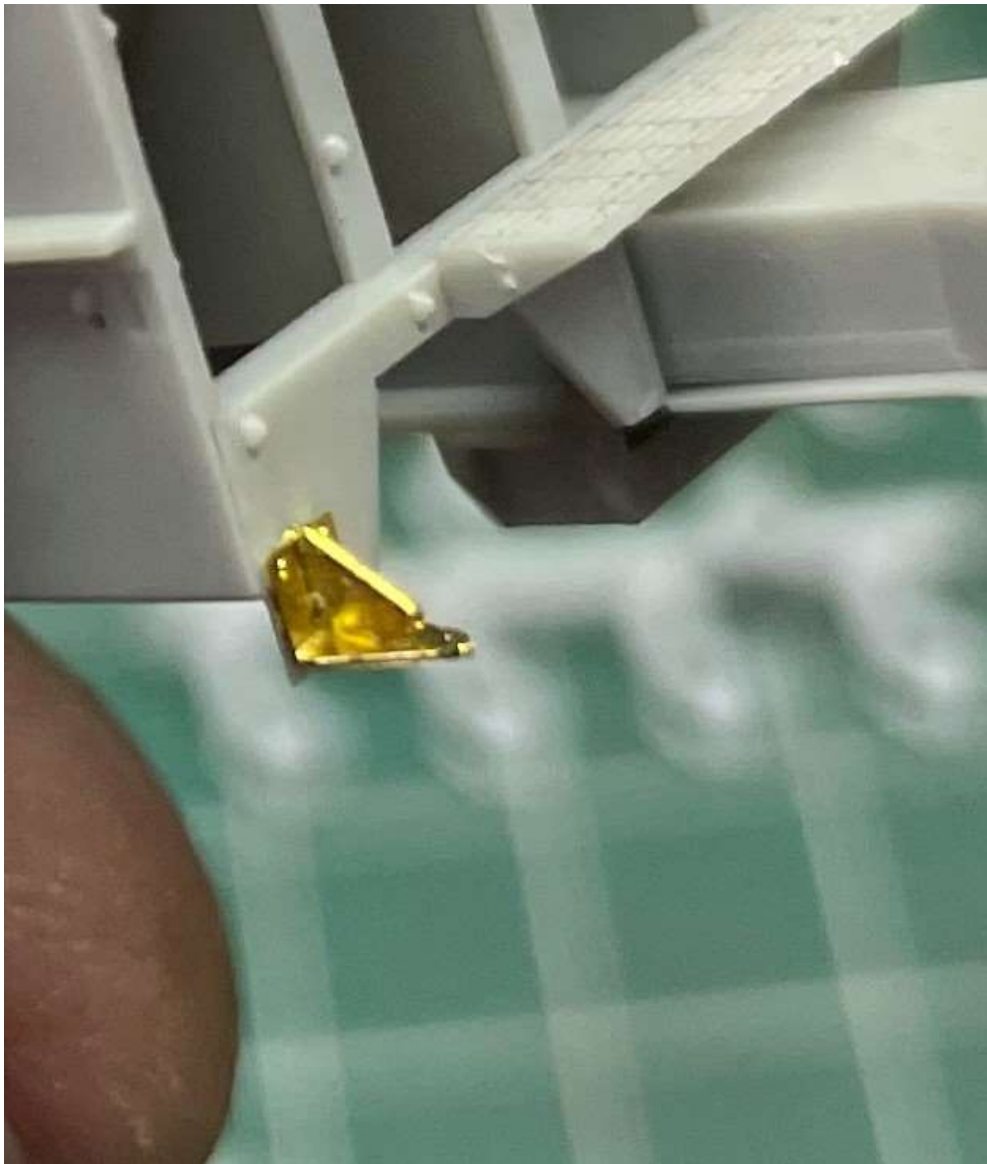
26. **Install Retainer Valve:** The retainer valve is the other small part from the parts bag. It fits in a slot and hole on the car side. Set in position and glue



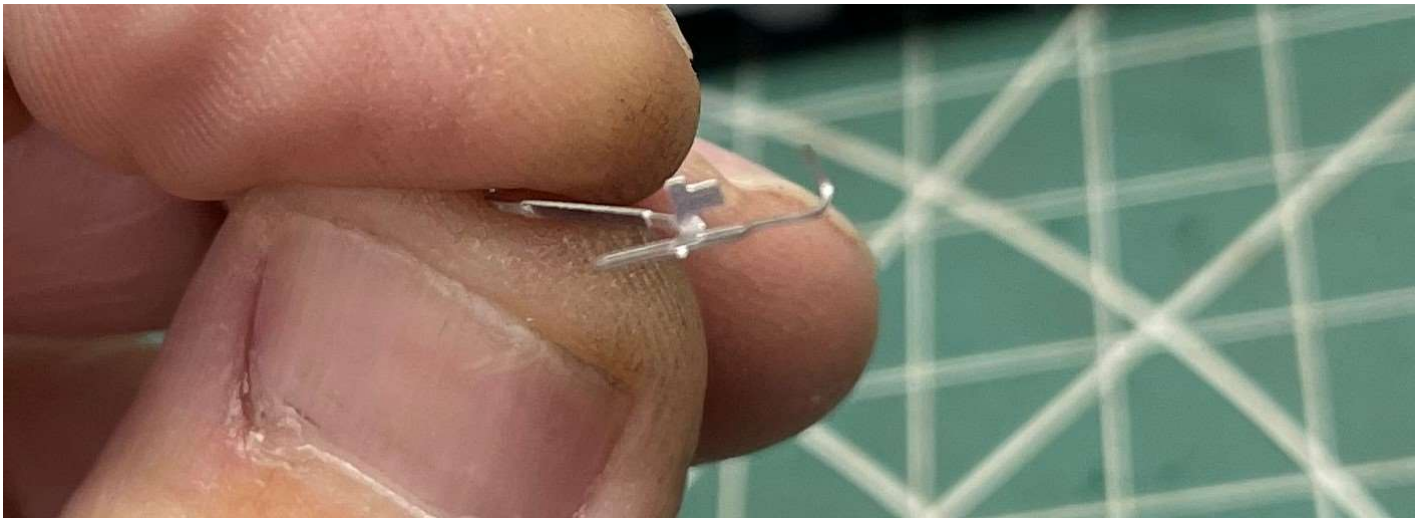
27. **Install Cut Lever Brackets:** The cut lever bracket consists of two brass parts, an L shaped part that fits against the end sill, and a flat piece that sits on top of it when installed. Beginning with the L shaped part, position it so that the flat side rests on the end sill and the triangular leg protrudes out from the end of the car, and line up the opening in the flat side with the opening in the end sill. Use a small bit of CA to set in place making sure not to cover the opening on the end sill

28. The second (flat) part has a large tab and a small tab. The large tab fits in the opening of the L bracket and into the end sill, and the small tab fits in the slot of the bottom part of the L. Carefully secure with CA making sure not to fill the hole in the end of the bracket

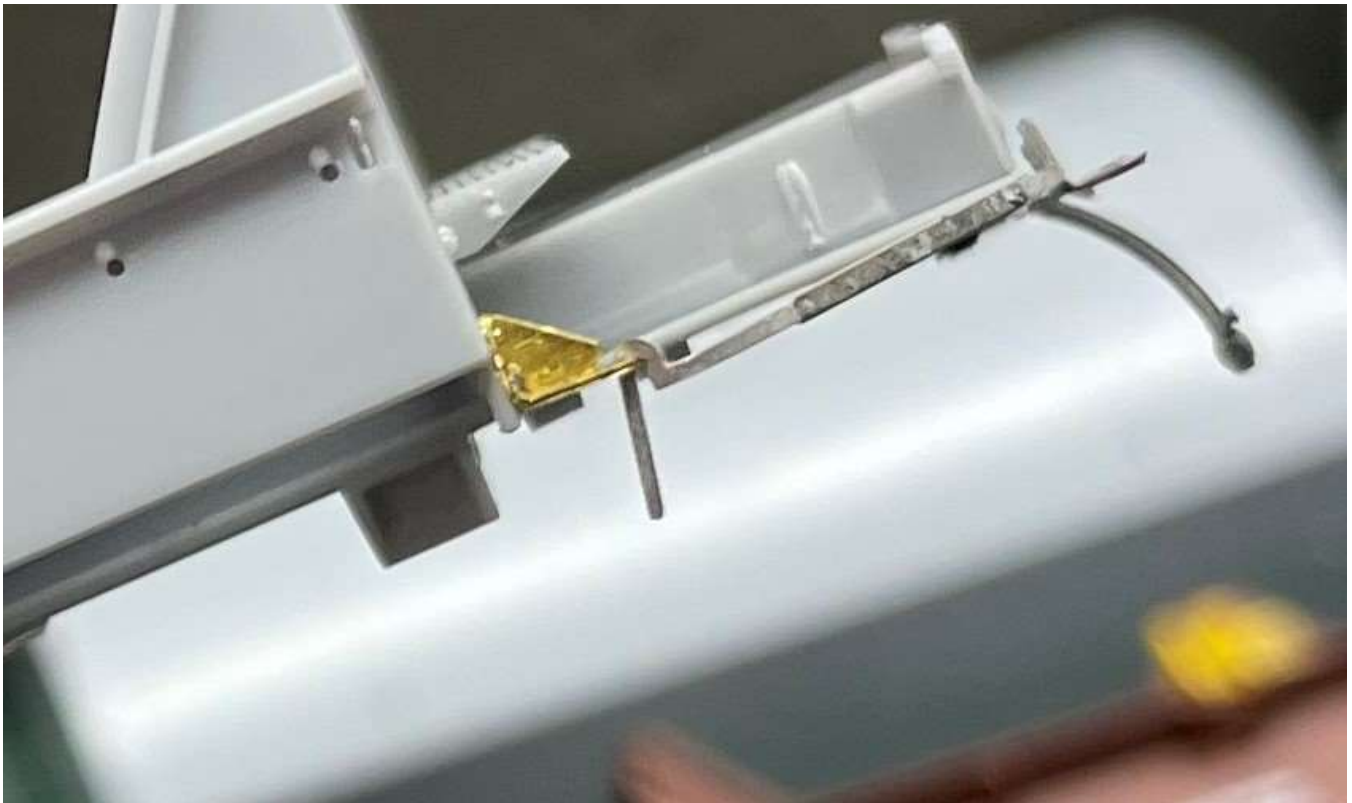
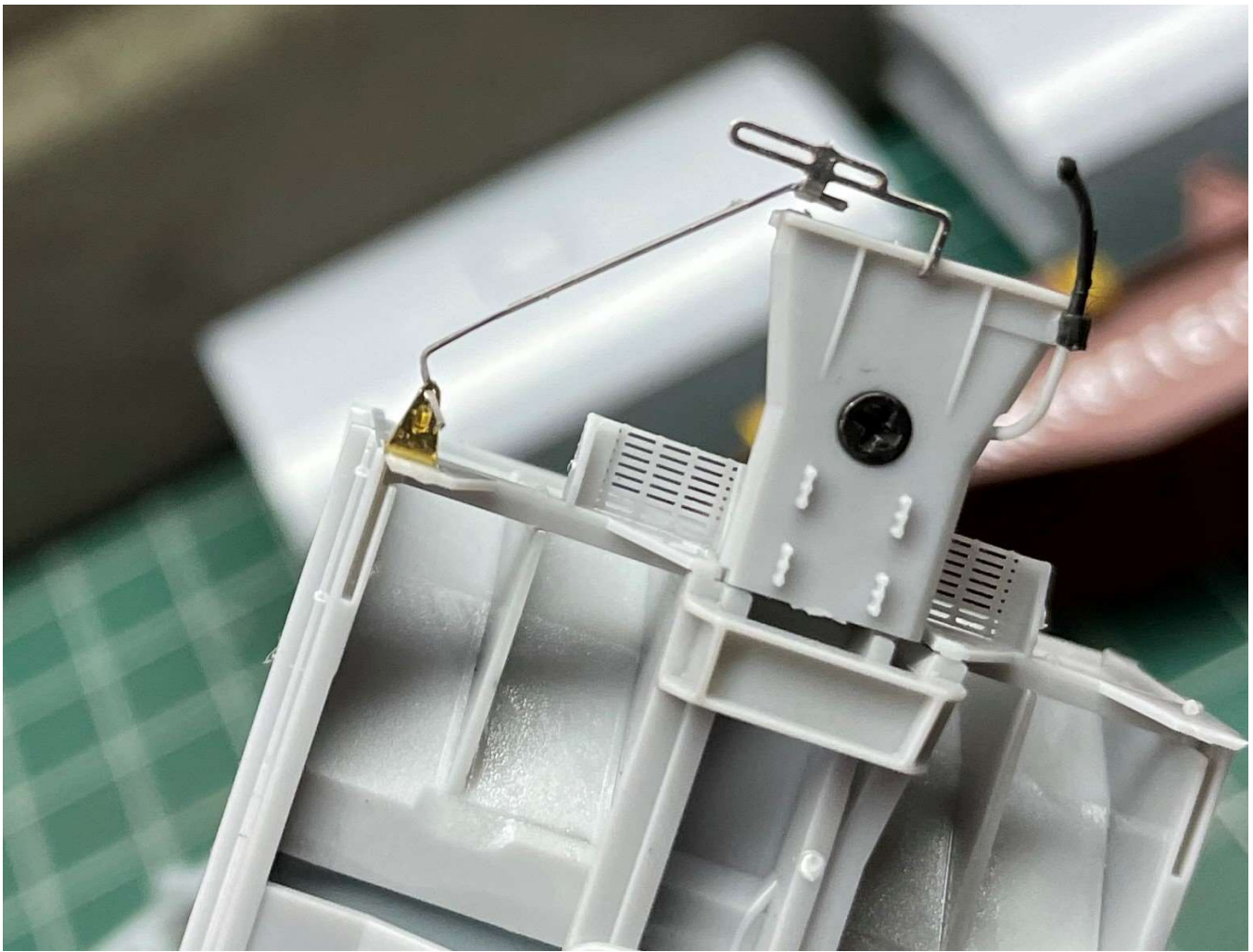




29. **Install Cut Levers:** Locate the two cut levers. You will need to make two small adjustments:
1. At the handle end (which goes into the bracket) you will need to open up the gap slightly so it sits all the way down on the bracket
 2. On the coupler end, you will need to put a 90 degree bend on the end of the wire so it fits in the hole in the coupler box cover (see photos)



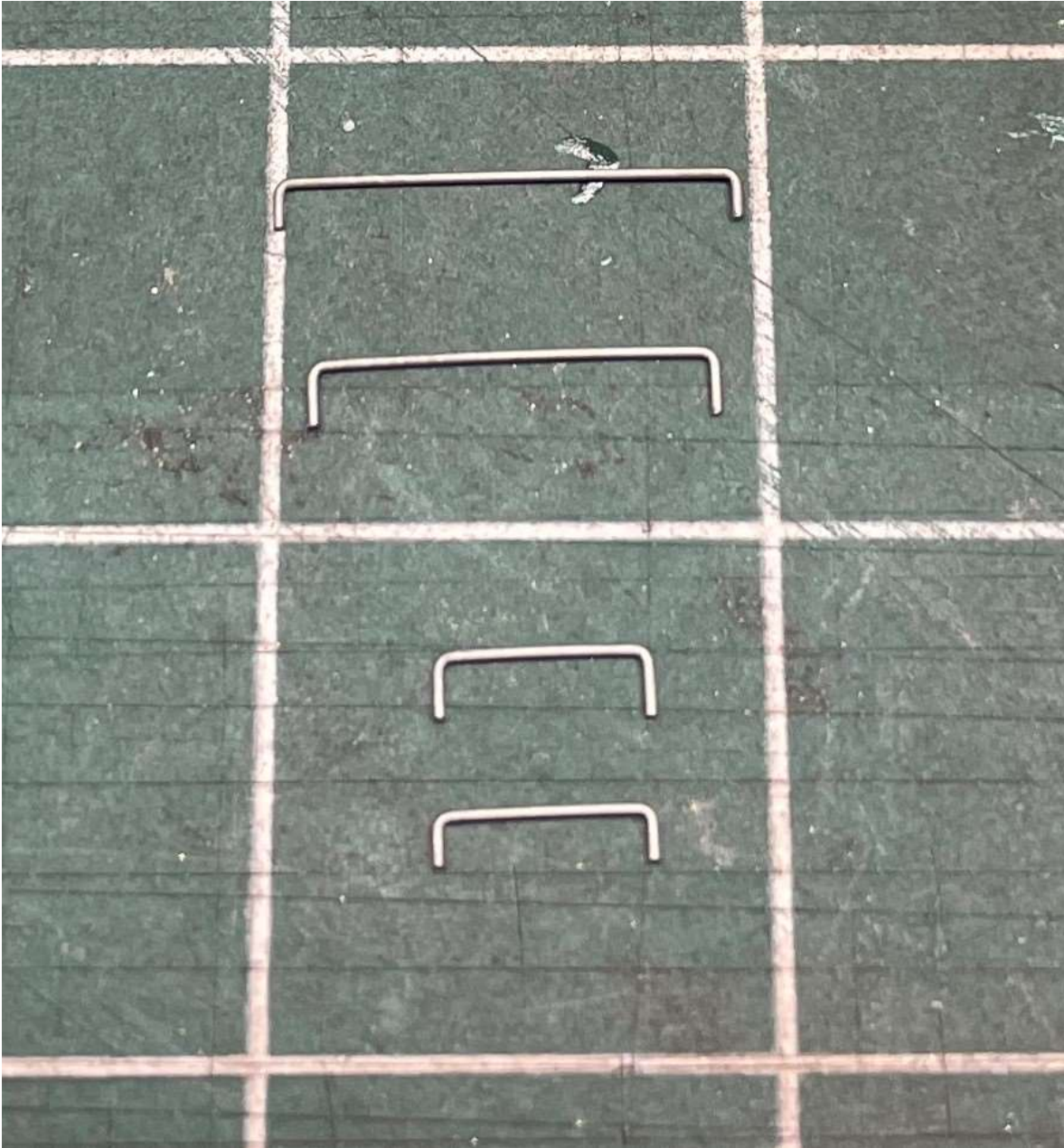
30. Once you have made the modifications, insert the handle through the bracket from the top until it sits flush, then maneuver the other end until you can insert the pin into the hole in the coupler box cover. You can tack one end or the other, but it still needs to be flexible enough to be able to install couplers later



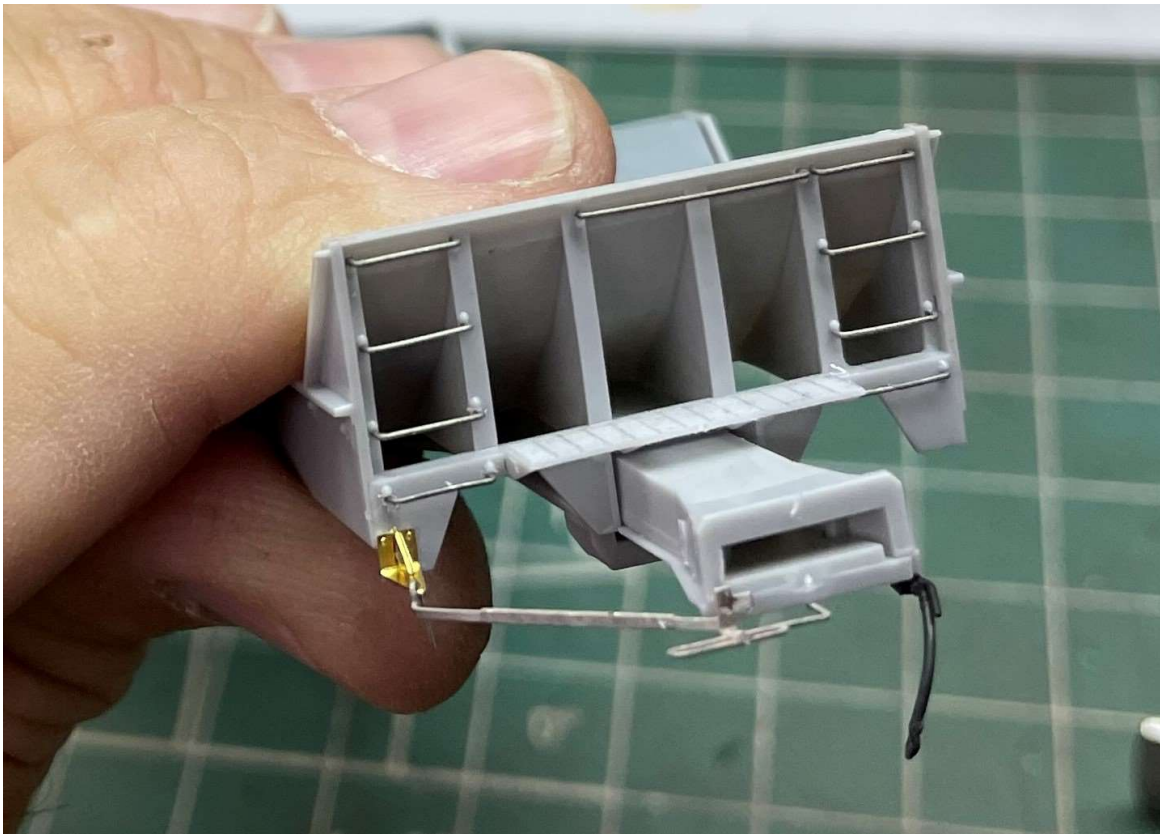
Grab Iron Installation:

There are four sizes of grab irons:

- 16 are "short" with short legs
- 8 are "short" with longer legs
- 4 are "medium"
- And 2 are "long"



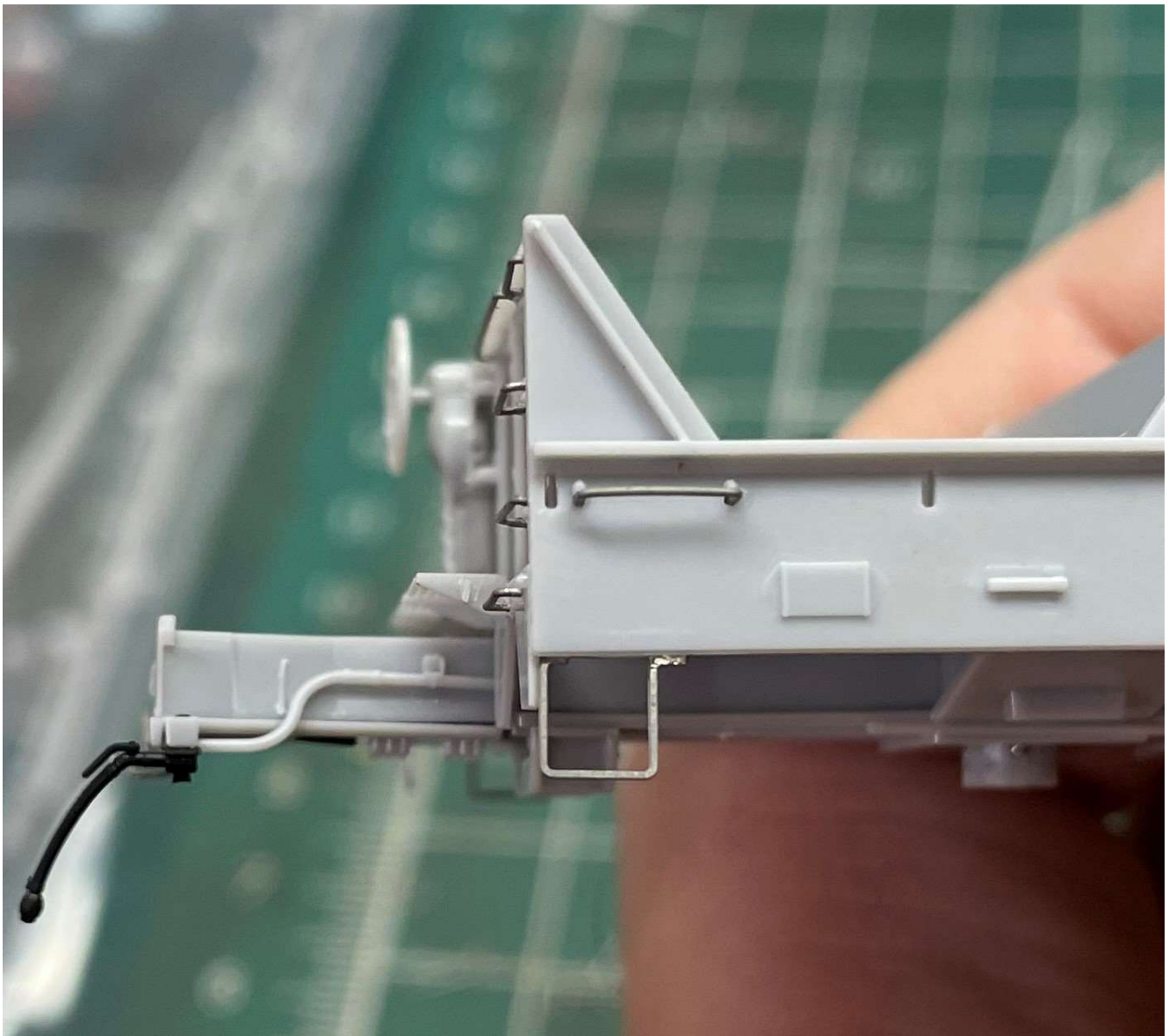
31. **Install End Cage Grabs:** The end cages use the 16 short grabs, as well as the two longest. Install on both ends and secure all with CA. (see photo)



32. **Install Car Body Grabs:** There are four grab irons on the carbody, one at each corner of the sides. Use four of the remaining eight short grabs for these. Secure with CA.



33. **Install Stirrups:** The stirrups fit into slots on the underside of the car sides in the four corners with the "feet" facing the center of the car. Position and secure with CA



34. **Install Hood Cover Holders/Guides:** The last two parts for the carbody are the hood cover holders/guides. They have tabs that fit into slots on the top of the sides of the car. Position on each side and glue



This completes assembly of the carbody.

Hood Assembly:

35. **Install Wire Hood Guides:** Begin the hood assembly by locating the eight small pieces of wire from the parts bag for the hood guides. They get inserted into the holes at the bottom edge of the covers. Secure all with CA.

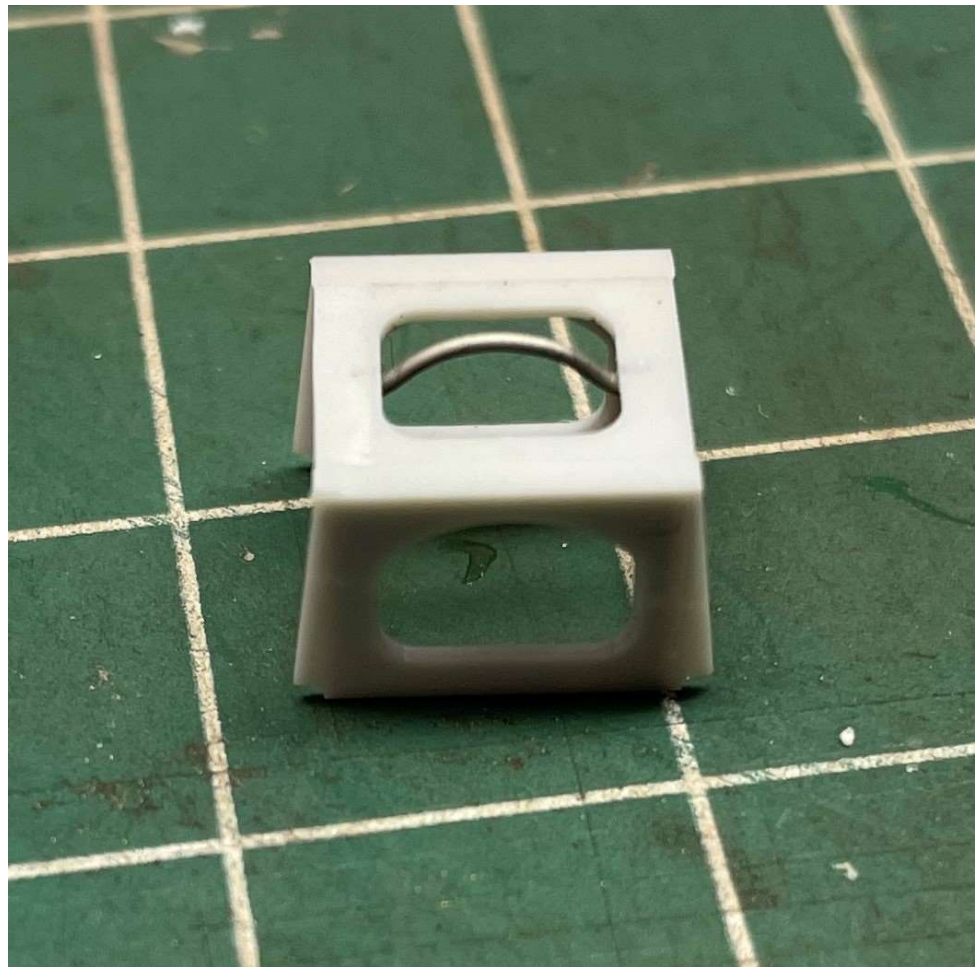
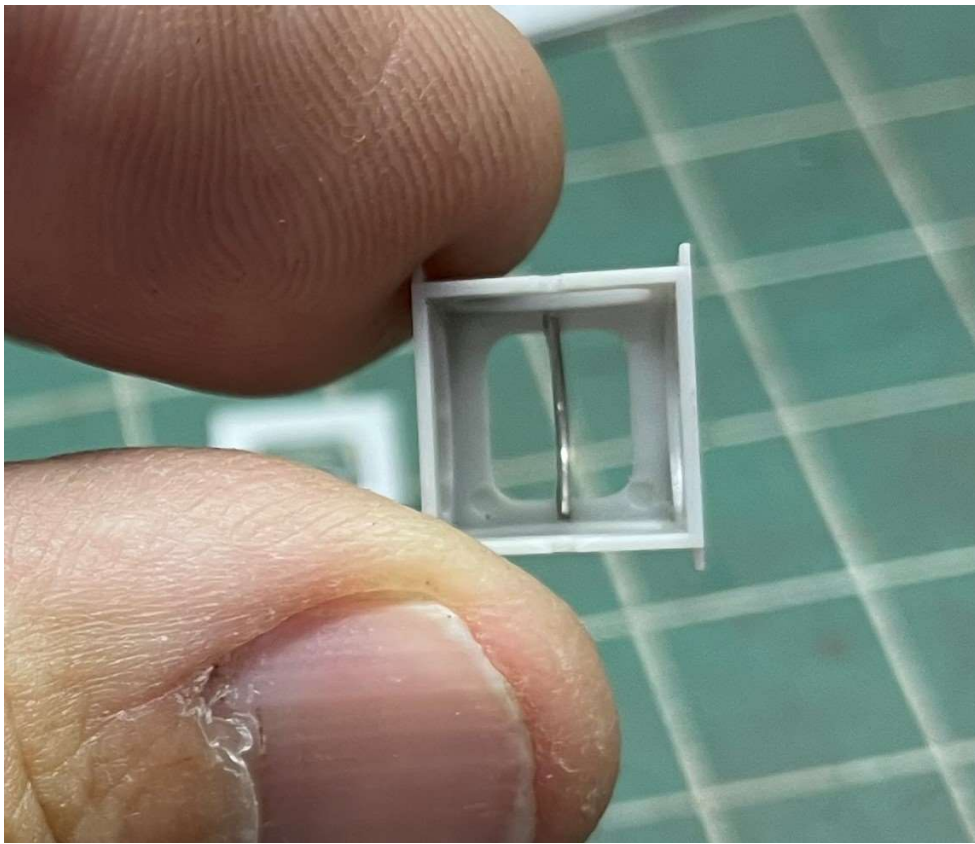


36. **Install Hood Grabs:** Of the remaining grab irons, each hood gets a long and a short on each side of the hood. Secure all in place with CA.



37. **Assemble and Install Lifting Handles:** The lifting handles/brackets are two pieces. If you turn the bracket upside down, you will see a small slot on either side of the casting. This is where the small, curved wire will sit. With the bracket upside down rest the curved wire ends in the slots with the curved part facing away from you. Secure with CA. (see photo). When both are complete, install the assemblies to the top of the hoods and glue in place.







38. **Install Hood Stacking Brackets:** Each hood gets four stacking brackets. These are keyed so they can only fit one way. Install all eight and glue in place.



This concludes assembly.







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