



Instructions: General American 6,000 Gallon, 3-Compartment Tank Car Kit

11/2013

Thank you for purchasing the Tangent Scale Models General American 6,000 Gallon, 3-Compartment Tank Car Kit! A few quick notes before starting:

- **Instructions have many large images:** Since some model builders are more visually oriented, we have included text and photos within these instructions. As you can see, many of the images are rather large, to aid in your model building.
- **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.
- **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. Thank you!
- **These instructions are meant for adults:** While we applaud bringing younger modelers into our hobby, this model includes many small parts, some of which are sharp. Therefore, this kit is recommended for those 14 years of age and older.
- **We offer our trucks separately:** Our gorgeous new ASF 50-ton spring plank trucks are available separately, with your choice of RP25 or Semi-Scale tread free-rolling all-metal wheels! Separate brake detail included!



- **We offer semi-scale wheels separately:** We offer semi-scale wheels separately in 12 or 100 axle packs to fit our gorgeous new ASF 50-ton spring plank trucks!



Overview of this kit's contents:



Standalone parts included:

- Part 1 - Bottom section of tank
- Part 2 - Top section of tank
- Part 3 - Frame top
- Part 4 - Frame bottom
- Part 5 - Weight (for inside tank body)
- Part combo 6 - One pair of the gorgeous new Tangent Scale Models ASF 50-ton spring plank trucks with all-metal wheels.

Parts bags included:

- Item #7 contains the walkways, tank handrail, and brake rigging
- Item #8 contains the domes, ladders, and assorted plastic parts. There are many parts in this bag and some of them are very small, so be EXTREMELY careful when opening and handling this bag!
- Item #9 contains all of the wire parts
- Item #10 contains the tank bands and placards
- Item #11 contains the couplers and various screws

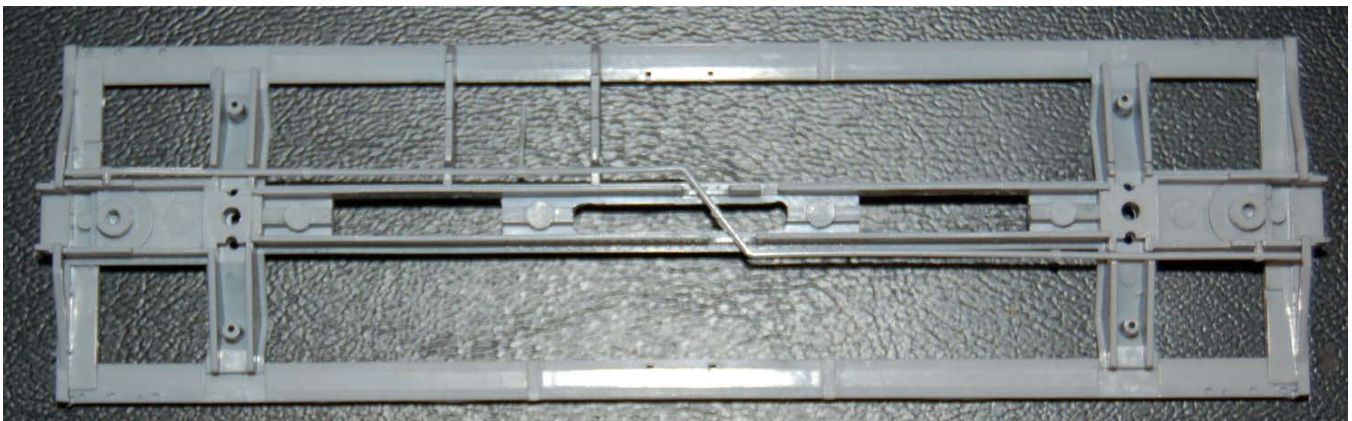
Tools needed/recommended:

- Styrene cement
- CA-type cement
- 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

This kit is NOT recommended for children aged 14 and under.

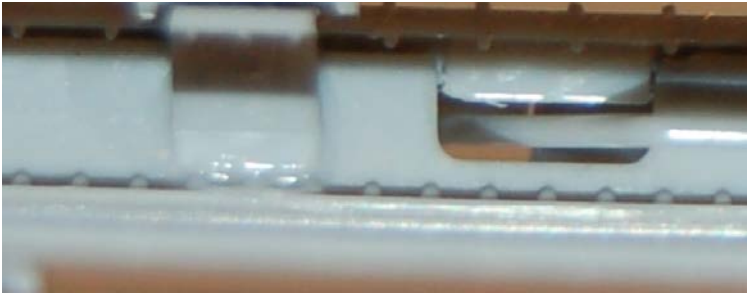
FRAME INSTRUCTIONS:

1. **Install the train line in the underframe.** You will notice that there is a set of notches in the underframe staggered across from each other. This is where the diagonal part of the train line sits. The train line can only fit one way in these notches. You will also notice that there are two smaller notches at each end of the frame. These accept small pins on the train line. Lay the train line in place and use a small amount of plastic cement or CA to glue the train line in place.

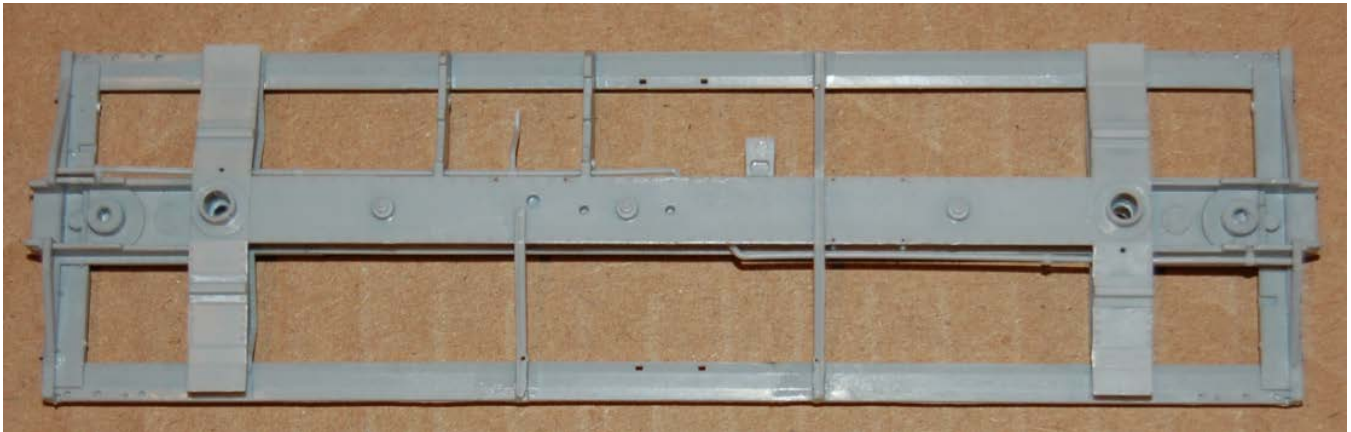


2. **Glue the triangular brake cylinder support in place.** Find the brake cylinder support in the bag of plastic parts. You will notice a smaller notch in the center portion of the car that this

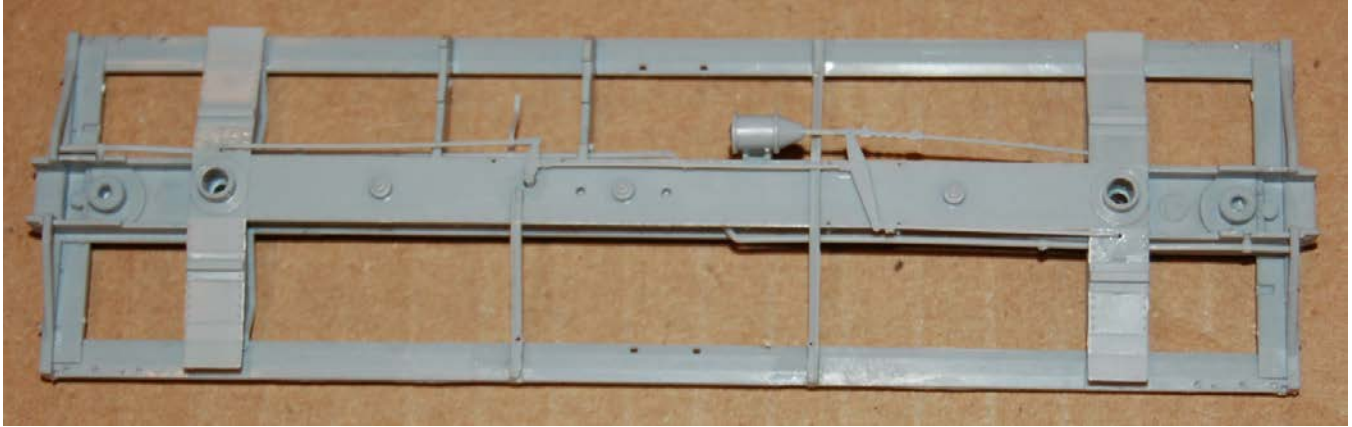
part fits into. Orient it so that the opening in the bracket faces toward you when you have the frame upside down on the workbench. Glue this part in place.



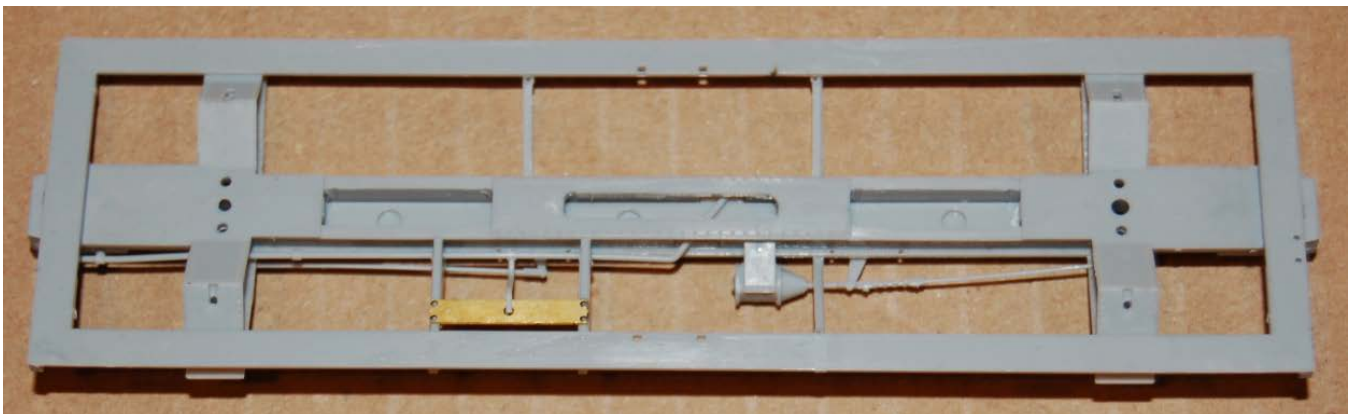
3. **Glue the frame bottom in place.** You will notice that the frame bottom piece has three "arms," two on one side and one on the other. The ends of these arms fit into notches on the underframe walkway. Orient the frame bottom so the arms match the slots and glue in place both on the center sill and at the walkway notches.

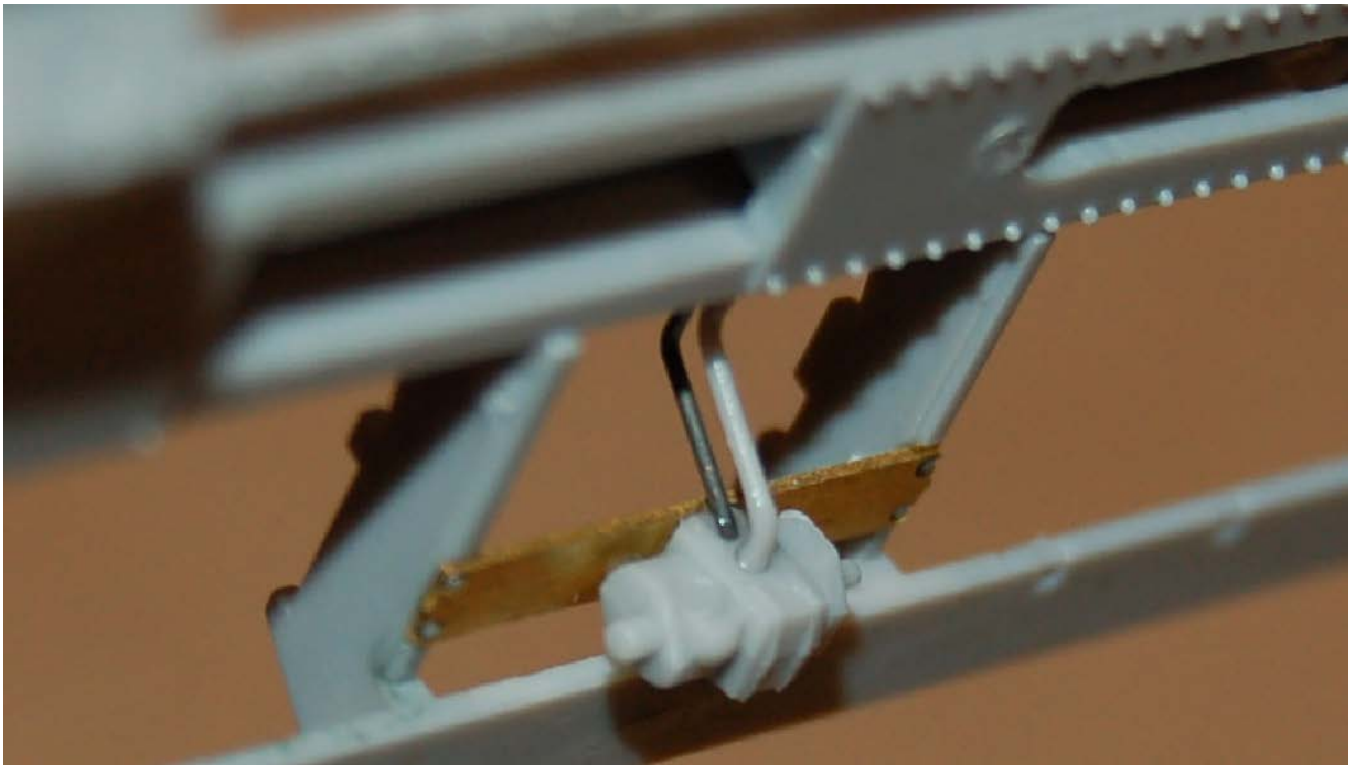
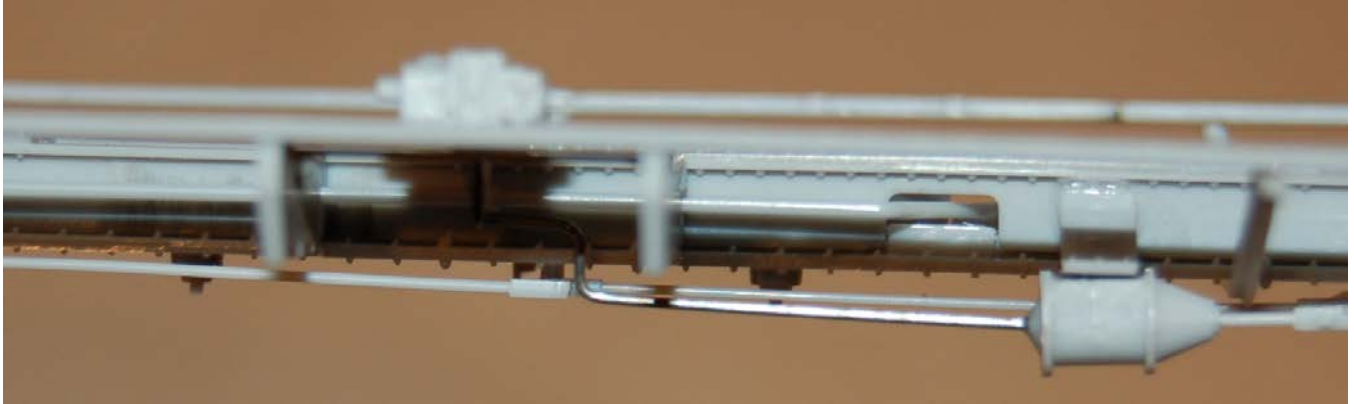


4. **Install the brake rigging.** Orient the assembly so that the piston fits into the slot on the bracket you installed in the previous step. Doing this will also align three other connection points: one on each bolster and one on the on the center sill. The piece with the chain fits in a small slot above the truck bolster. This piece is flexible so it can be gently bent into place, but it is also very delicate so be very careful or it can break. Again, there is only one way that this part can fit.

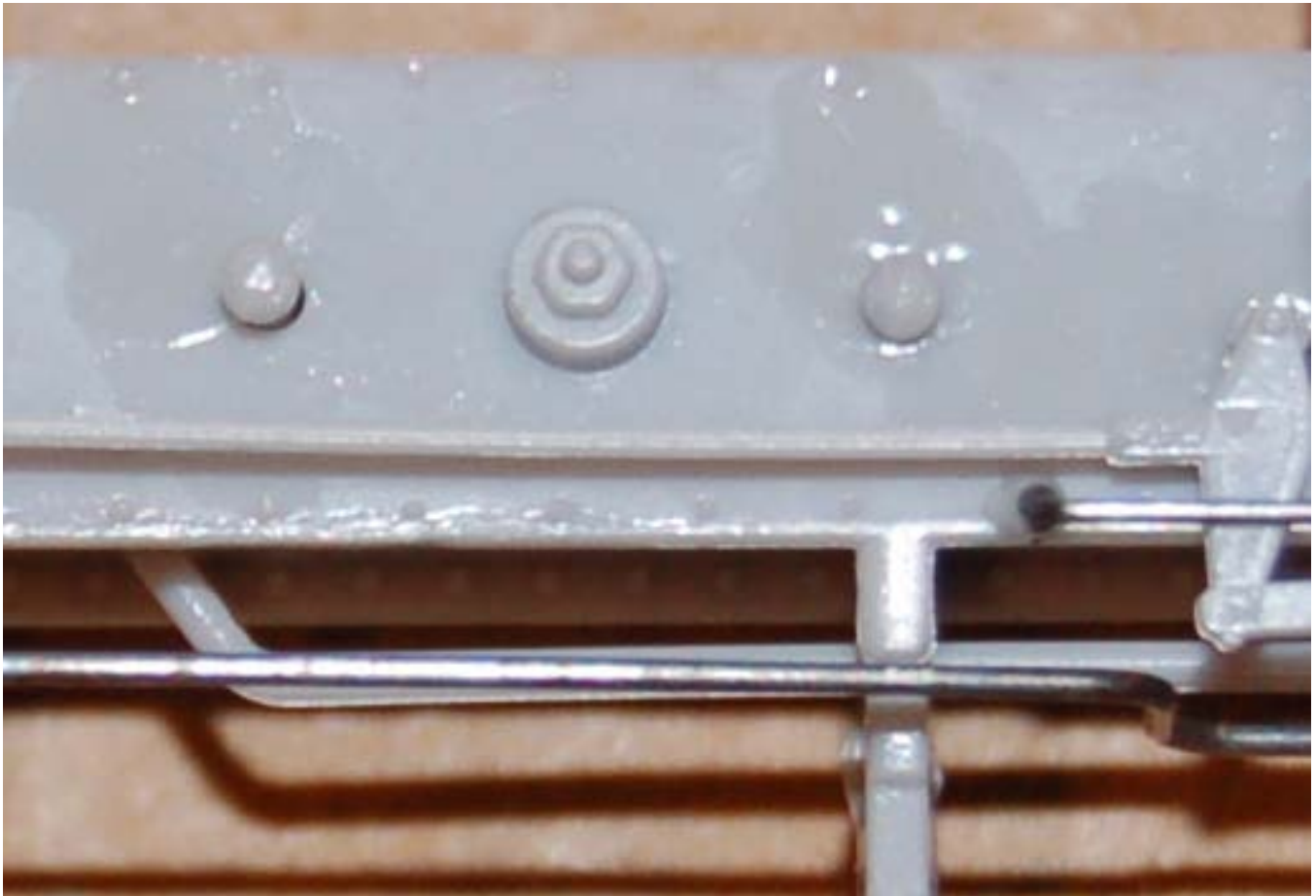


5. **Install the AB valve support.** The next piece to install is the small rectangular brass piece for the AB valve support. You will find this in the bag #4. Turn the underframe right side up and you will see two supports that run from the center sill to the walkways. Each of these supports has two small locator pins that the brass piece will fit over. Use CA type cement and glue the bracket in place. The AB valve sits on top of this bracket. The AB valve has a small nub on the underside that fits into the hole in the center of the brass support. There are also two small holes on the back side of the AB valve. These face the center sill of the car. The larger hole is for the curved piece that is part of the train line and the smaller hole is for the wire that comes from the back of the piston. This is the wire part from bag #5 that has all of the bends in it. The straight side goes into the back of the piston and the other end goes into the back of the AB valve. It will only fit one way. Glue in place with CA.



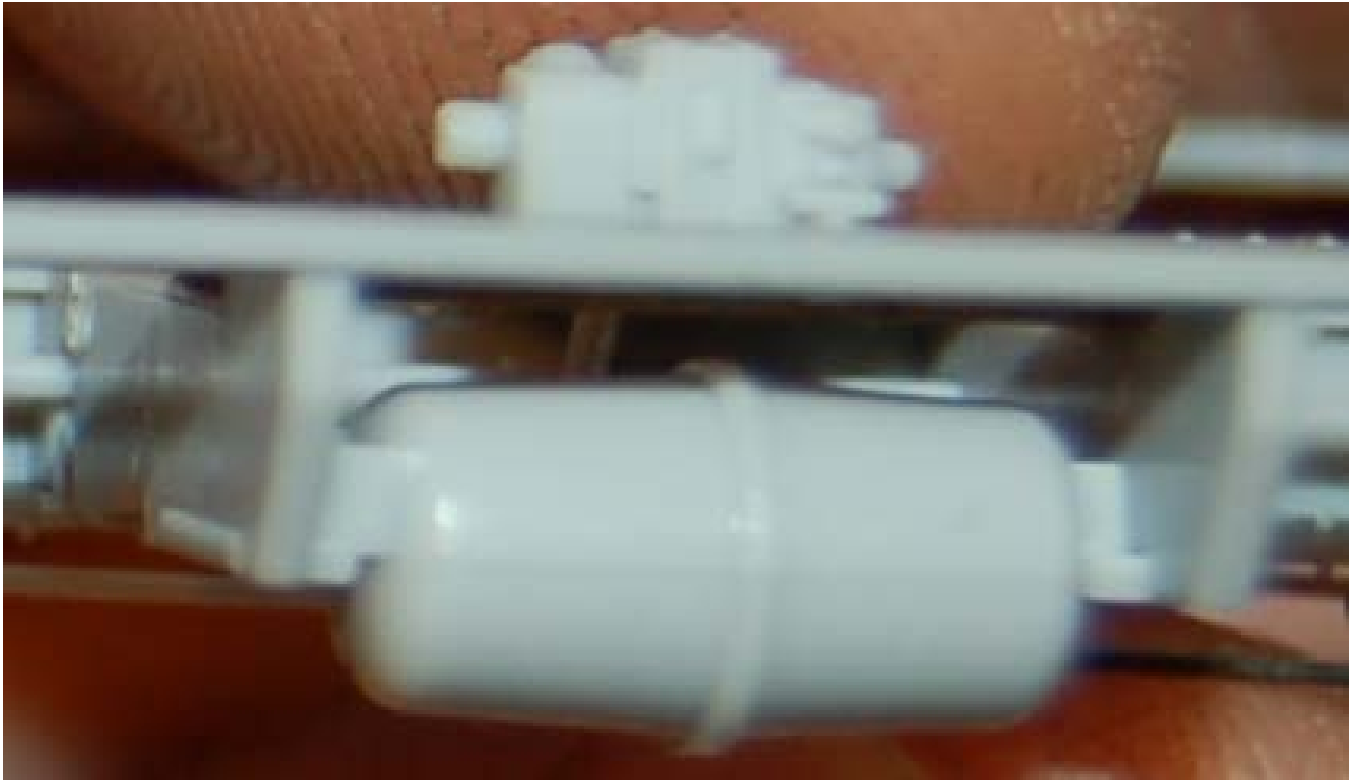


6. **Install the outlet valves into the frame bottom.** Turn the frame upside down (bottom facing you). Glue the two small tank outlet valves into the two small holes on either side of the center of the car center line.

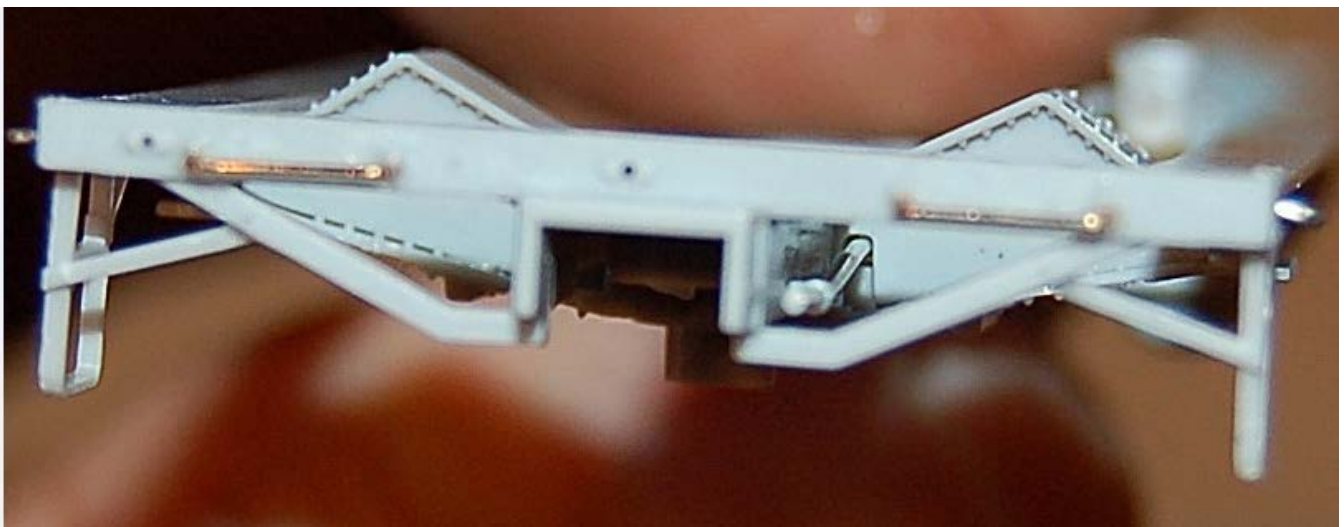


7. **Install the brake hangers.** Locate the three wire parts used for the brake hangers. These have a slight bend in each of the legs, as opposed to a drop grab that has a 90 degree bend. Use a #79 drill to open the holes in the center sill for these parts. Install the three hangers and glue in place.

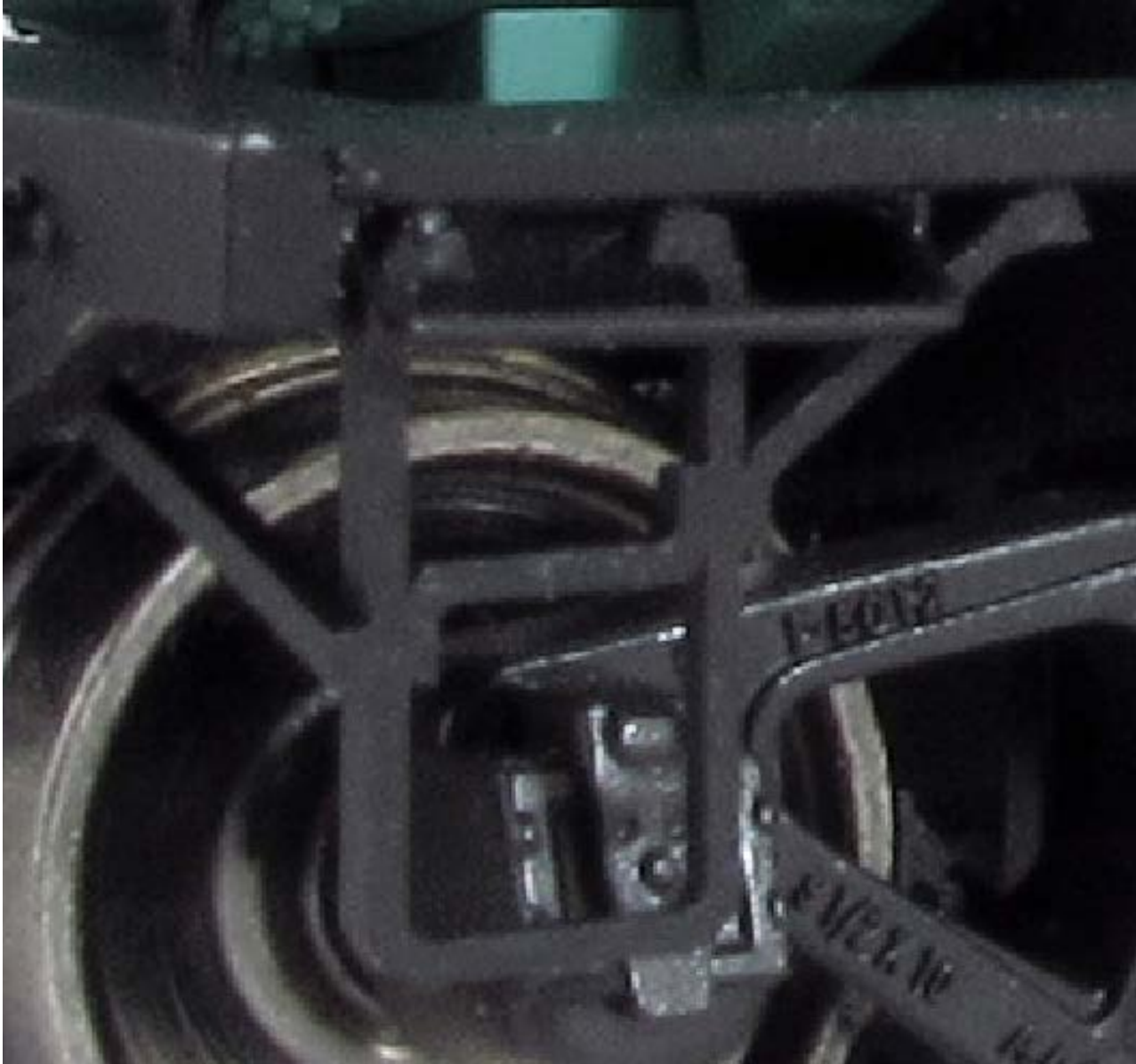
8. **Install the air reservoir.** Orient the air reservoir so the two small locator pins on the side are facing the center of the car.



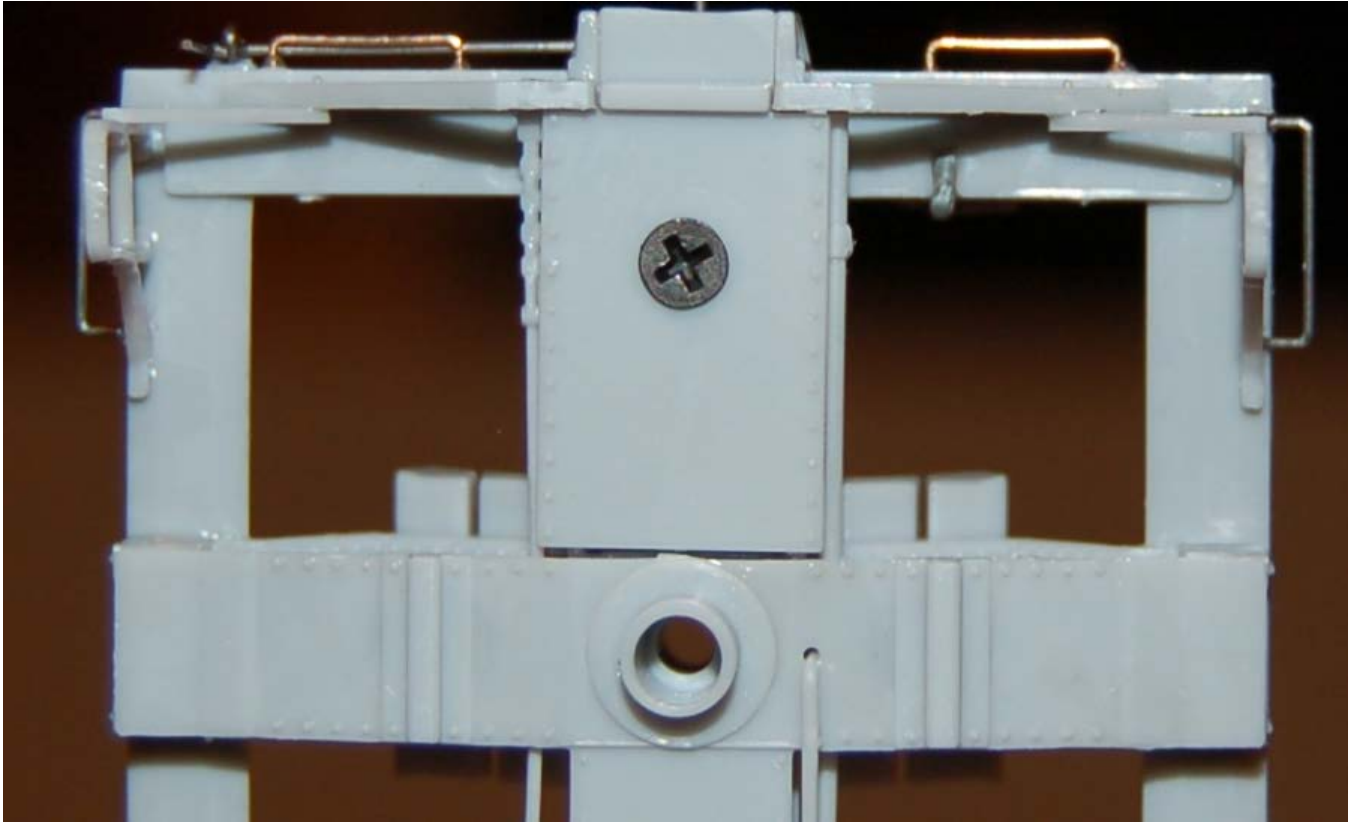
9. **Install the end grab irons into the frame top at the end of the car.** There are four drop style that apply to the ends of the frame, located on both sides of the coupler box and centersill. Drill out the holes for these parts with a #79 drill and glue these 4 grabirons in place with CA-style cement.



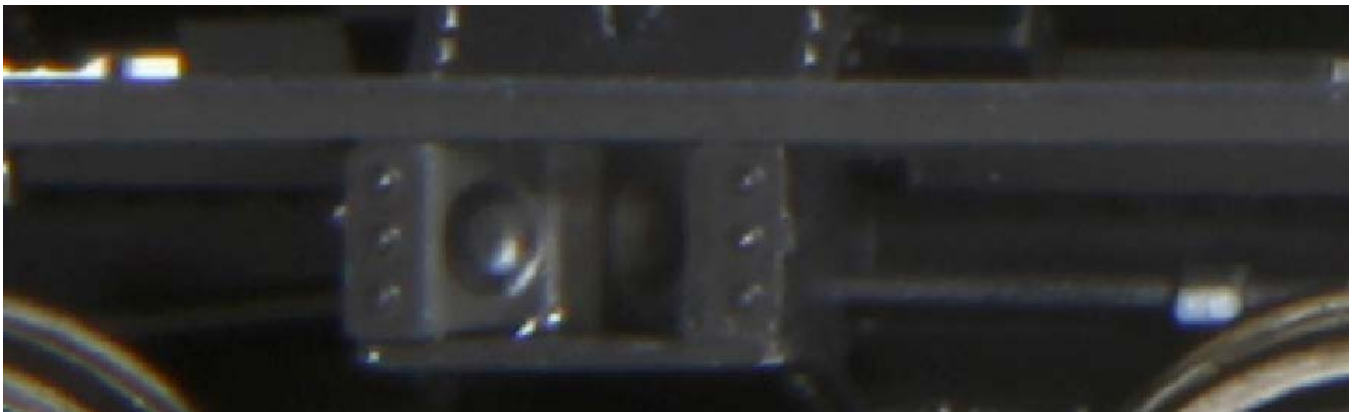
10. **Install the side grab irons into the running board on the sides (at the ends) of the car.** There are four drop style wire grab irons that apply to the running board. These effectively sit in front of the stirrup steps in the corners. Drill out the holes for these parts with a #79 drill and glue these 4 grabirons in place with CA-style cement.
11. **Install the four plastic corner steps.** You will find 4 locating pin holes for these. It is best to ensure a tight bond with watery-type styrene cement.



12. **Install the coupler covers.** Using the two smallest screws, install the coupler covers with a fine Phillips head screwdriver. You may or may not choose to install the couplers at this time due to your preferences for painting and masking.



13. **Install the poling pockets.** One of the most defining features of the Type 30 General American underframe are the poling pockets within the bolster assembly. The poling pockets (the small rectangular V-shaped plastic parts) go into the slots on the end of the bolsters. They have a small nub on the back. Orient the nub so that it is toward the bottom of the opening and glue in place (if you have this part upside down it will not fit flush).

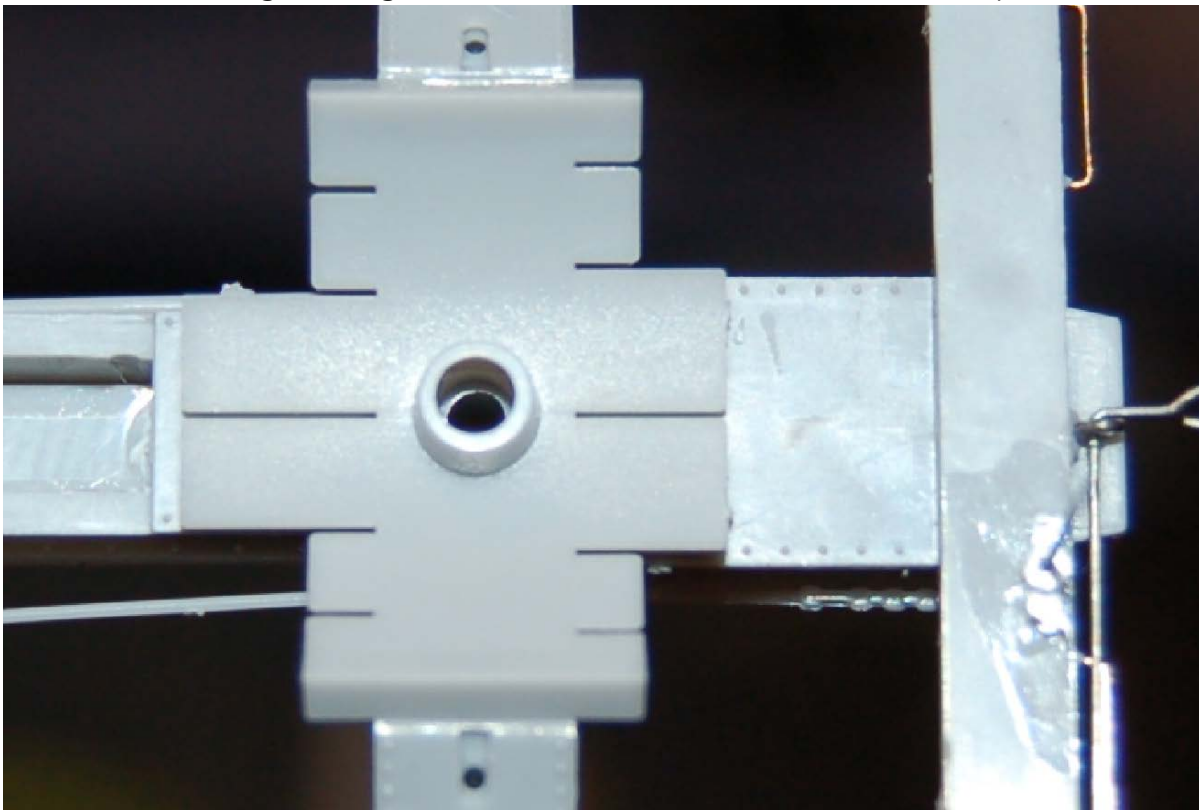


14. **Install the pin lifters.** Pin lifter installation involves three small parts. Here is the best sequence for installation:
- a) Install the first eyelet in the corner location.
 - b) Put another eyelet on one of the pin lifters.
 - c) Insert the pin lifter in the corner eyelet (the side without the loop).
 - d) Using a pair of tweezers, grip the other eyelet and glue it in place (right above the coupler pocket).





15. **Install the two tank saddles.** You will notice that they have one side that is slightly longer than the other. The longer side goes toward the center of the car. Glue in place.

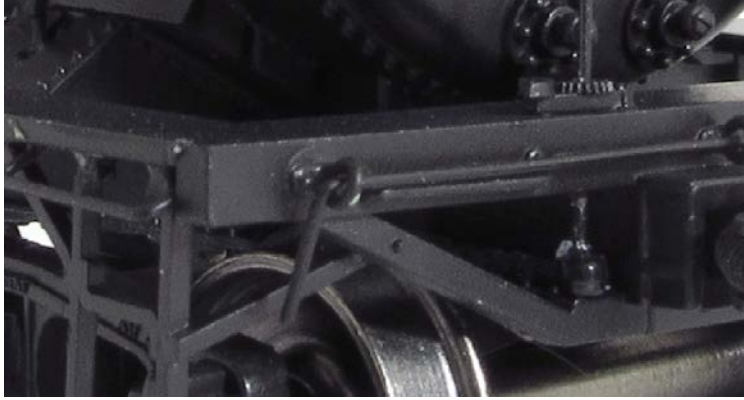


16. **Install the brakewheel ratchet.** There is a very small plastic part that is the brake wheel ratchet. It goes on top of the end walkway that has two small holes. Glue in place.



17. **Install the brake staff and brakewheel.** Drill a #79 hole through the brake ratchet to accept the brake wheel staff. The brake staff is a square wire part that installs into the brake ratchet in the previous step. You will also see a small plastic part representing the brake chain. The straight end of this part fits into a slot above the bolster and the round end accepts the brake staff. Slide the straight end into the slot above the bolster and let the round end rest on the coupler pocket support. Insert the brake staff through the ratchet and into the round end of the brake chain. Glue everything in place.





18. **Install 4 hazardous material placards into the running board.** There are two types of placards; one with a straight mounting pin and one with a 90 degree bend. The straight style is for the sides and the 90 degree style is for the ends. The three arms on the bolster cover piece have small holes for the placards. Install one of the straight style on the side of the car that has the single arm. Install the other straight style one in the arm that is diagonally opposite of the first one. There are small slots on the underside of the end sills for the remaining placards. Glue these in place.
19. **Install routing placard into the running board.** There is a small rectangular placard that goes into the hole in the arm shown below. Glue in place.



This concludes the underframe construction process.

TANK CONSTRUCTION

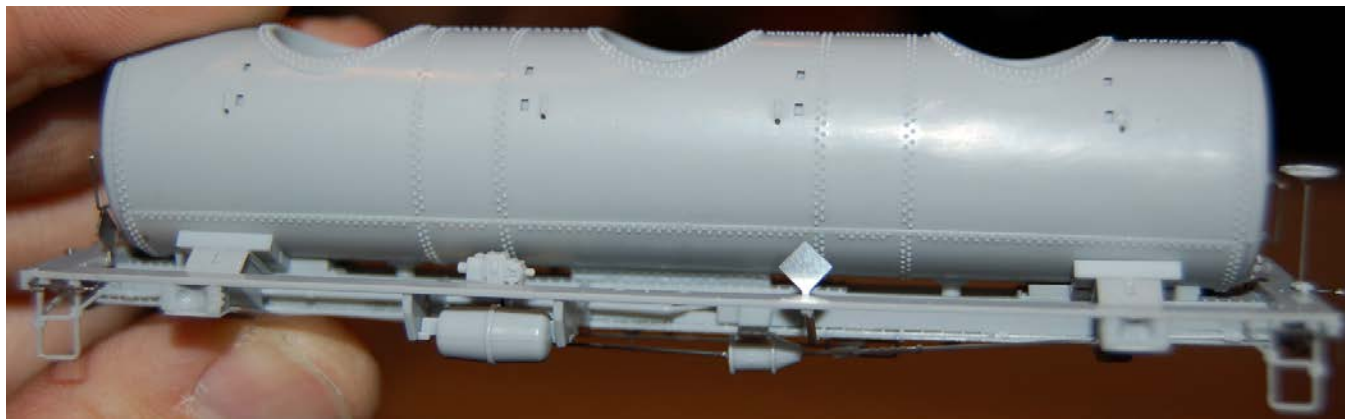
20. **Install weight into lower half of tank body.** Begin tank construction by adding the weight to the lower half of the tank. The weight is secured to the tank with the two small screws that have what looks like a washer on them.
21. **Glue the top half of the tank body to the bottom half.** Once the weight is secured in the previous step, glue the top half of the tank on the bottom half.
22. **Attach the steam line receptacles to the end of the tank car body.** On each end of the tank body you will see two circular openings. Glue one steam line receptacle into each of these openings.



23. **Install four wire grabs in tank body ends.** There are locations for wire grab irons on the four corners of the tank. Open these holes with a #79 drill. Locate the four corner grabs from the wire parts bag and glue in place. These grabs have a slight bend in the legs, so they resemble a drop style.



24. **Mount the tank body to the underframe.** On the centersill of the underframe you will notice a long slot. This is the female mounting hole for the tank body. On the underside of the tank you will see a mounting bracket. This is the male mounting point for the tank. You may have to open the slot on the underframe slightly to allow the mounting bracket to sit flush. Lightly scrape the sides of the slot and test fit the tank. When it sits flush glue the tank to the frame.



25. **Attach the three domes to the tank body.** Find the three dome parts. The center dome is the one that has the locating holes for grab irons on either side. Install this dome first. The domes may fit tightly so dry fit the domes first to see if the openings need to be made a bit larger. Once satisfied with the fit, glue the domes in place. The domes are keyed so that they can only fit one way.
26. **Attach the dome lids in place to all three domes.** Looking down at the top of the domes you will see an outline on the dome surface. This is what you use to align the dome lids. Glue the lids in place.

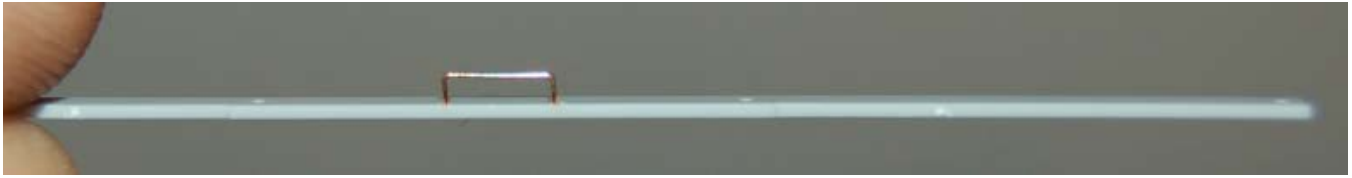


27. **Install dome vents in all three domes.** You will also see a small hole next to the dome lids. This is where the vent goes. Glue in place.
28. **Install wire eyelet into each dome vent.** Glue a wire eyelet into each one of the vents.
29. **Install the curved grabirons into the dome lids.** Locate the dome lid grabirons (these are the curved drop style) and glue in place onto the mounting hole on each cover.
30. **Install the grab irons on the outside of the center dome.** Glue the side wire grabirons (the curved straight style) on the center dome.

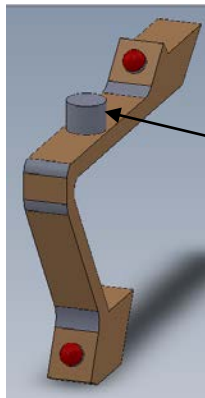


31. **Install the tank handrail.** We suggest dry fitting this part first to make sure all of the mounting holes are clear so that the handrail sits properly. If any of the holes are tight, use a #78 drill to open them up. To install the handrail, set it on top of the tank. Insert the mounting pin on one end of the car. Gently grasp the other end of the handrail and stretch it far enough so that the mounting pin on the other end of the handrail can be inserted into the mounting hole (again, please be gentle!). Doing one side at a time, insert the remaining mounting pins into the corresponding holes on the car sides. Glue in place.
32. **Install the grabirons to the tank walkways.** Locate the tank walkways, which are two long pieces of plastic. On the bottom of the walkways you will see four evenly spaced locating holes and two holes for the grab iron (these are at the front edge in the center of the

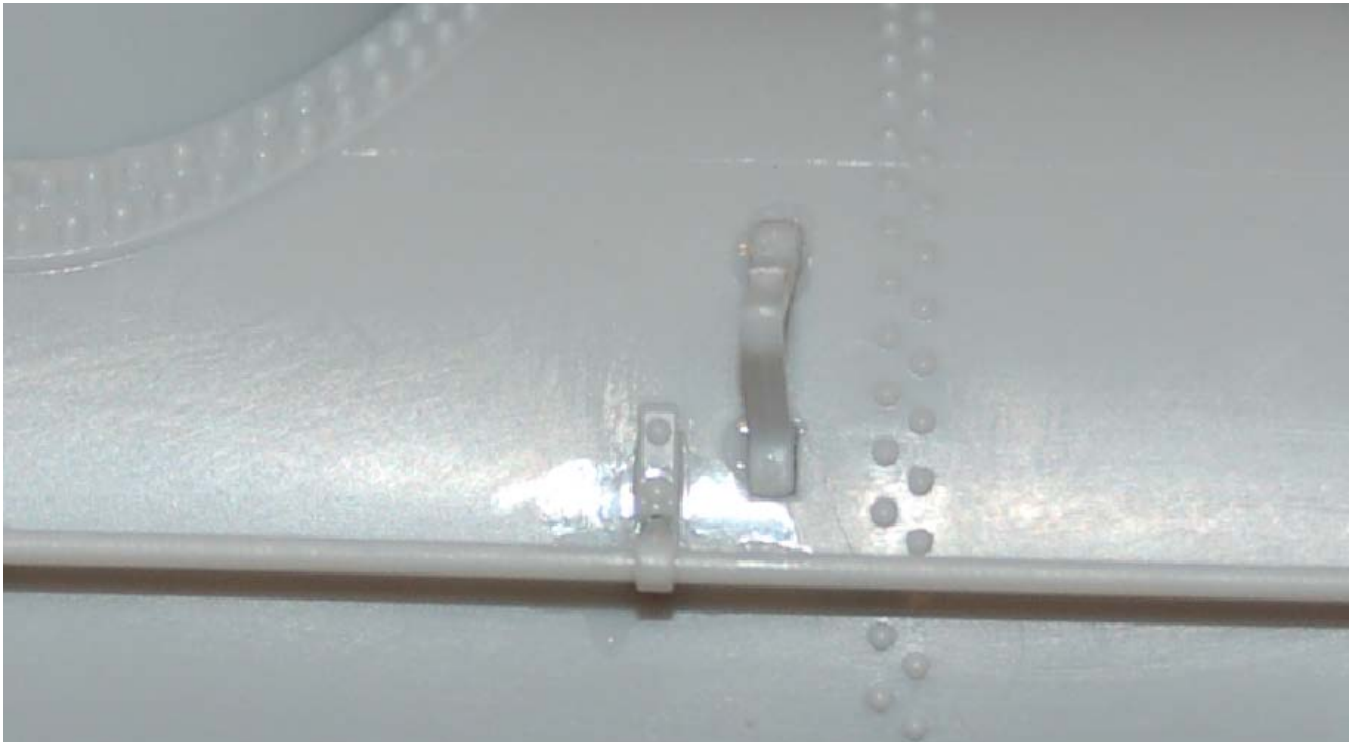
walkway). You do not want to drill out these holes as you do not want to see the ends of the grab iron above the walkway. Glue the grab iron in place on both walkways.



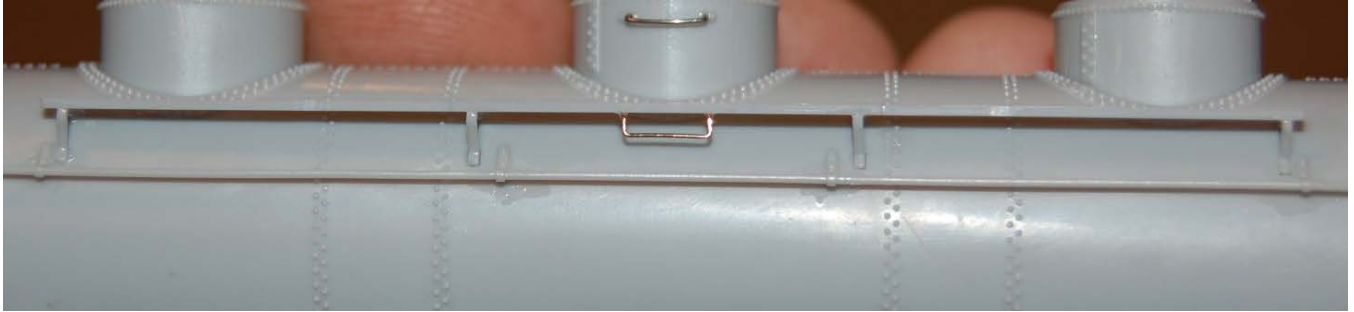
33. **Install the eight walkway support brackets.** You will notice a small locating pin on the longer arm of each of the brackets. This is not flash so do not remove it! These locating pins align with the holes on the bottom of the walkways. Glue the brackets on each side of the tank, using liquid styrene cement to ensure a small amount of movement flexibility. Then complete the next step.



Do not
remove this
locating pin!



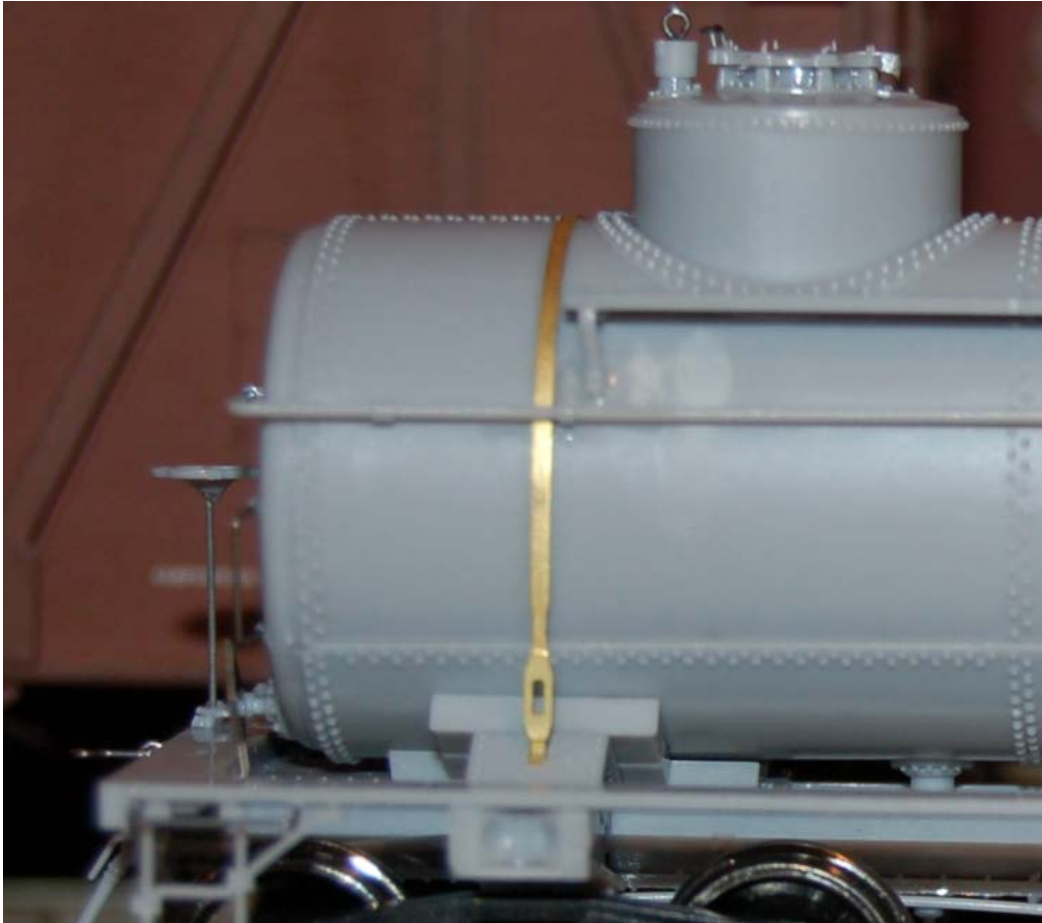
34. **Install the walkways to the support brackets.** Glue the walkways to the brackets lining up the holes in the walkways with the locator pins on the brackets.



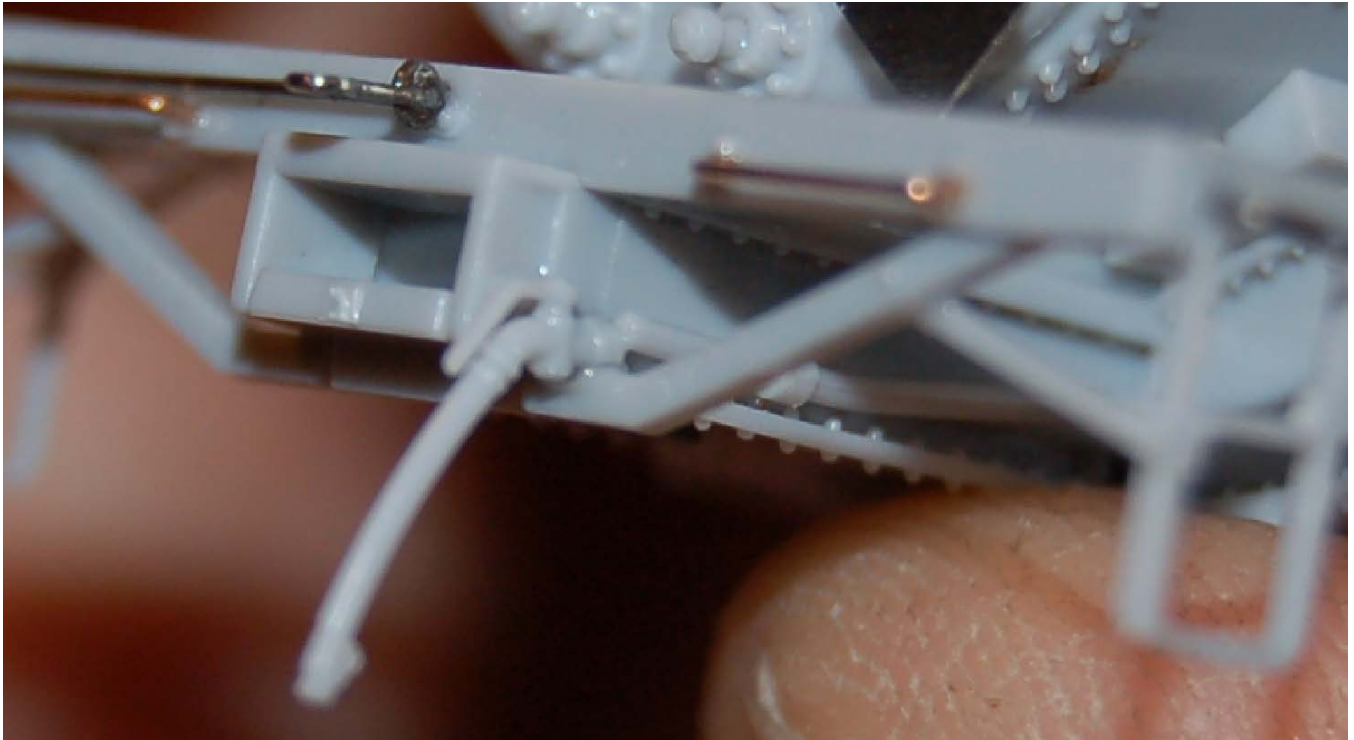
35. **Add the ladders to the sides.** Hook the top of the ladder around the tank handrail and insert the tabs at the bottom of the ladders into the corresponding holes in the walkway. Make sure to align the ladder with the grabiron. Glue in place.



36. **Install the tank straps.** Insert the straps behind the handrail and into the openings on top of the bolsters. The ends of the straps may need to be shortened slightly to allow the straps to sit flush around the tank. You also want to make sure that the turnbuckles (the small slots on the tank straps) are sitting at about the same height above the bolsters on each side. When satisfied with the positioning of the straps, glue in place.

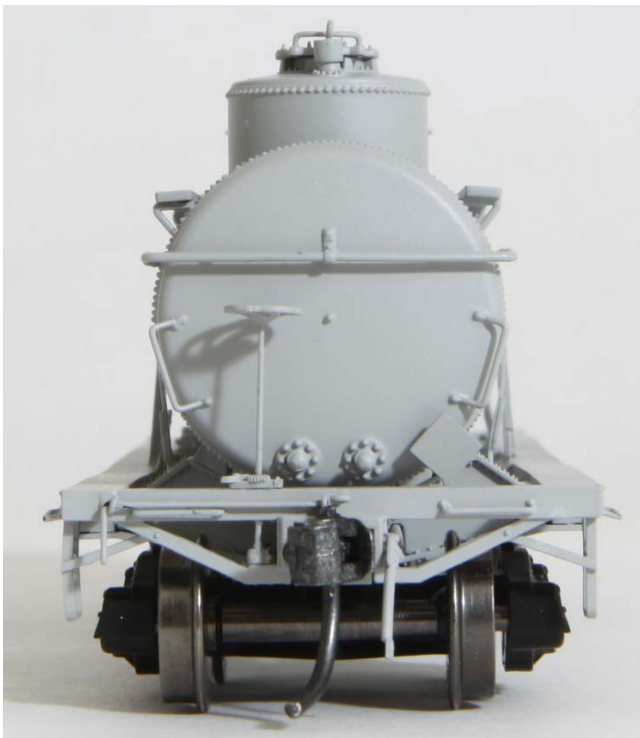


37. **Install the air hoses.** The ends of these will attach to the ends of the train line on each end of the car, and also rest on top of the coupler bracket.



38. Paint, decal, and weather the car, add trucks and couplers, and put into service!





Thank you again for buying this car from Tangent Scale Models. Your hard-earned dollars allow us to continue to bring you more models in the future.

Want to share your creation with the world? Please feel free to upload an image of your customized Tangent model to: <http://tangentscalemodels.com/share/>

