

BOEING 777 COVERED WELL CAR ASSEMBLY INSTRUCTIONS



Preparation

1. You will need a clean flat work area 3 to 4 square feet in size with bright lighting. This should include an area where parts can be set aside without getting dirty or damaged.
2. You should also have a spray booth or well ventilated and clean area to paint the parts.
3. Tools required are small files, small angled needle nose pliers, and toothpicks. Some sort of magnification will help in a few places.
4. You will also need wet/dry sandpaper of 240 grit, 400 grit, and 800 or 1000 grit.
5. Only remove the larger pieces from the box and separate from the foam wrapping when called for in the instructions. Do not remove the contents from the smaller poly bags until called out in the instructions. This will minimize the chance that the smaller parts get lost or damaged.

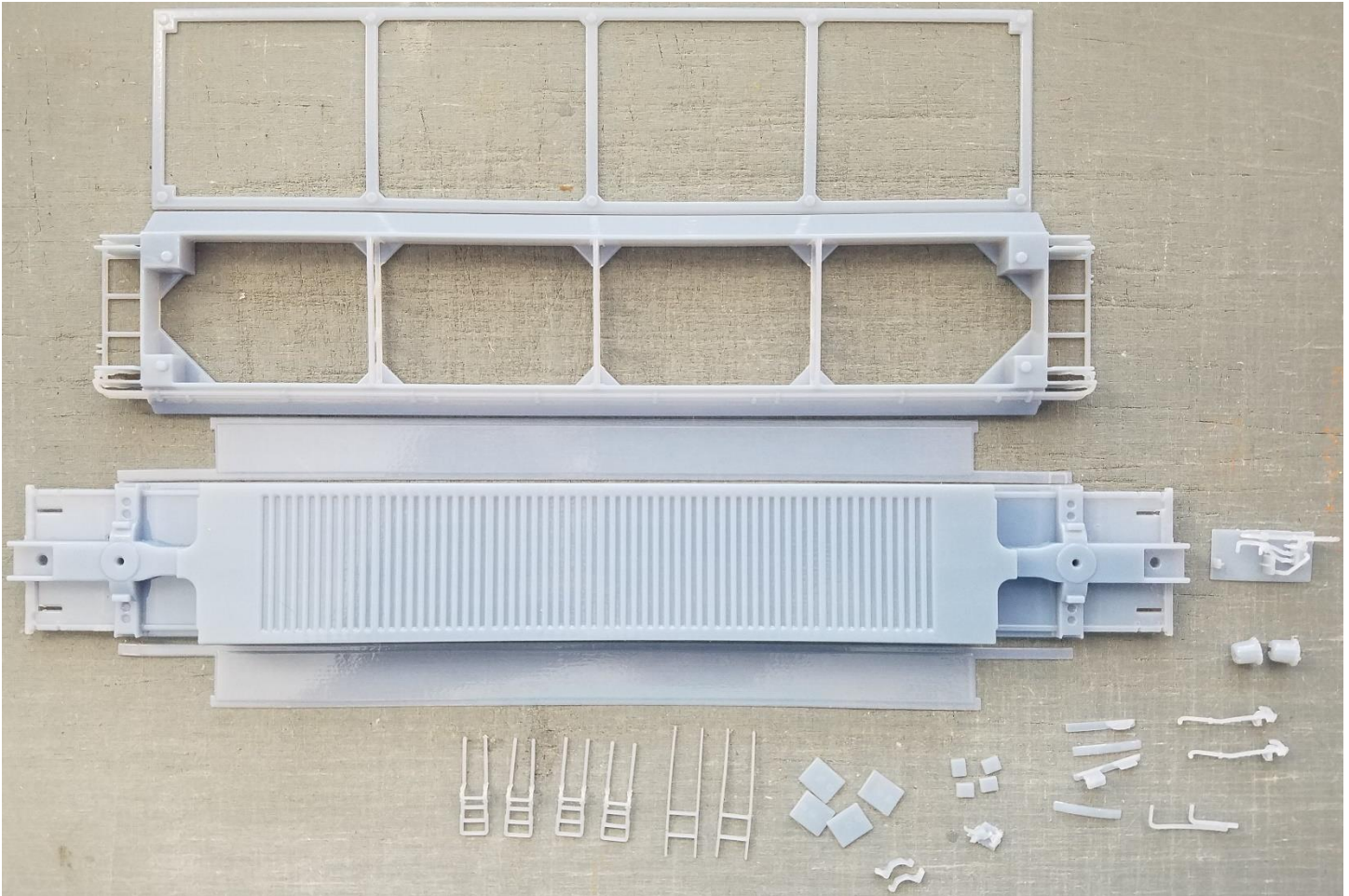
Assembly Notes

1. Please note that many parts in this kit have many small, fine details which are delicate. **Hold parts by the edge as much as possible to minimize the chance that any of those features get damaged.**
2. Use medium viscosity CA glue only. No other glue will hold the parts together. **Only a small amount of glue is necessary.** The glue will cure in a few seconds, regardless of the time advertised on the glue bottle.
 - a. For larger parts, place a small amount of glue on the part and spread the CA with a toothpick so all the joint surface is covered. Error on the side of less glue, as you do not want glue to ooze out the joints.
 - b. For smaller parts, place the CA on the tip of a toothpick, then apply the CA using the toothpick to the area to be glued.
3. Please note that the color of parts in your kit may vary from that shown in these instructions.
4. **Test fit all parts before gluing to ensure a proper fit.** Most parts will form a tight joint easily, but there may be a few occasions where you will have to use a small file or sandpaper to remove a small amount of material before the parts fit properly.

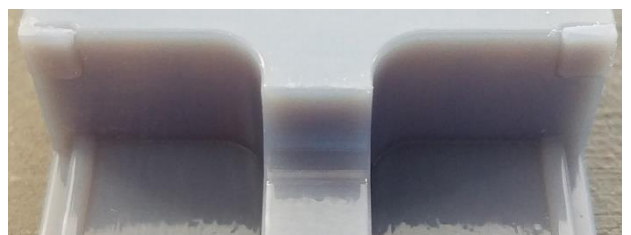
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Well Assembly

1. Unpack the Well Bottom, Well Sides, Well Middle, and Well Top.
2. Carefully remove the small parts from bag A.
3. Carefully remove the Ladders and Brake System from bag B. All of the parts to build up the well portion of the car are shown below. There will be 4 parts remaining in Bag B. They can remain there until you are ready to prime and paint.

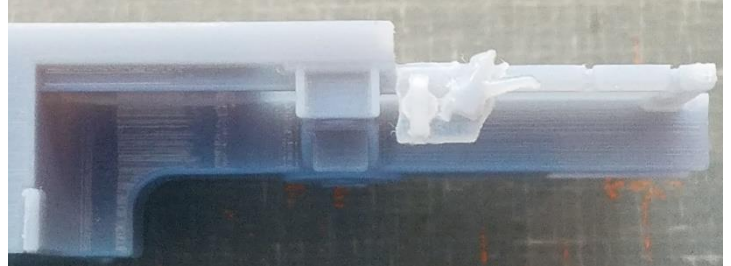
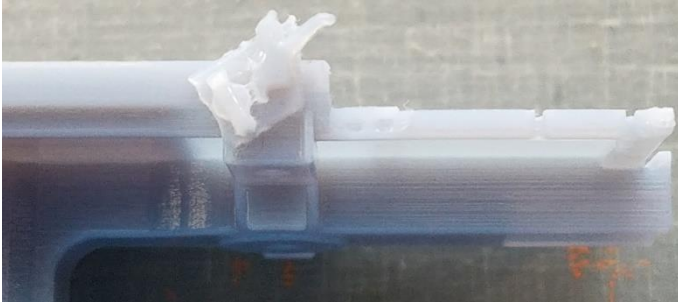


4. Using a toothpick, place a small amount of CA in the corner pocket of the Car Bottom. Place the Corner block into position. The blocks are taller than they are wide. Repeat for all 4 corners.

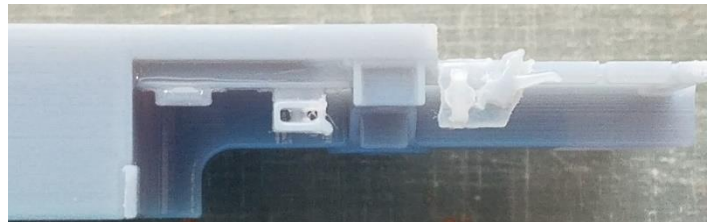
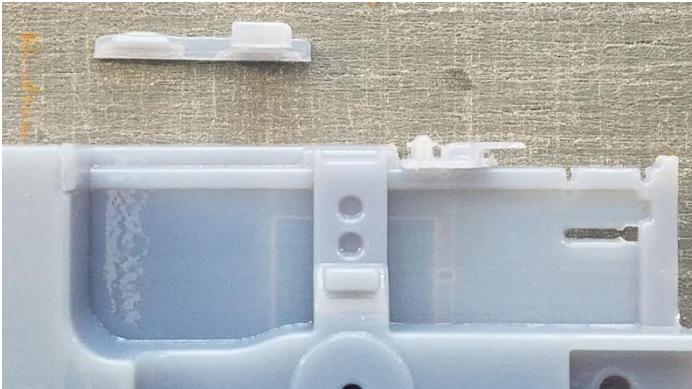


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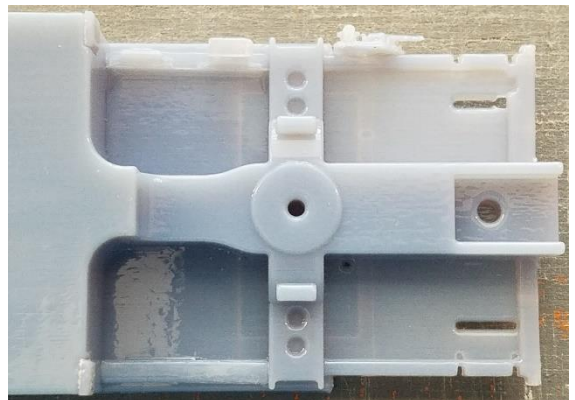
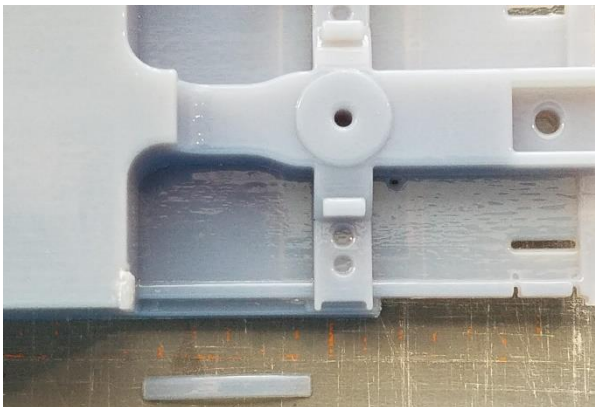
5. Locate the side of the car with two small holes on the platform side. The Brake Ratchet has two small pins that will fit into these holes. Apply a small amount of CA on the holes and place the Bracket into position as shown.



6. Locate the Underside Cap with Tag and Chain Roller. Glue this part into position as shown below.

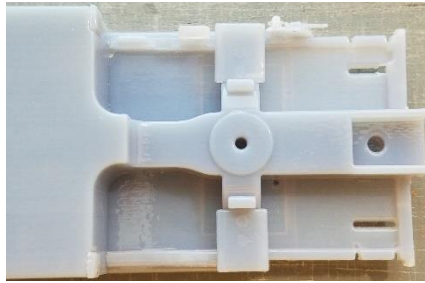
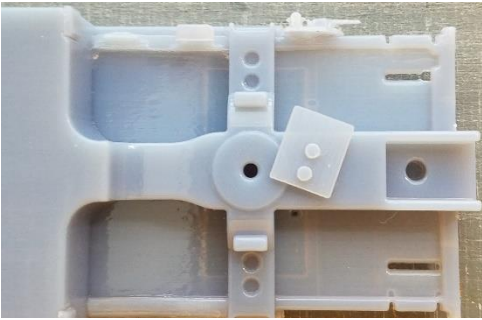


7. Glue one of the smooth Caps into position as shown below.

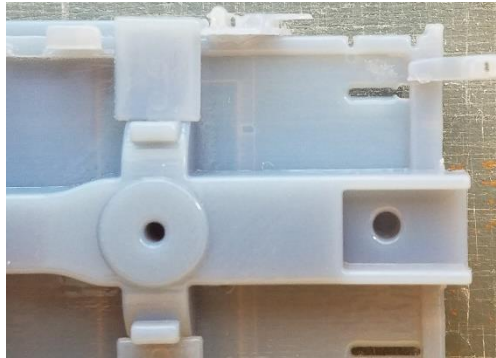
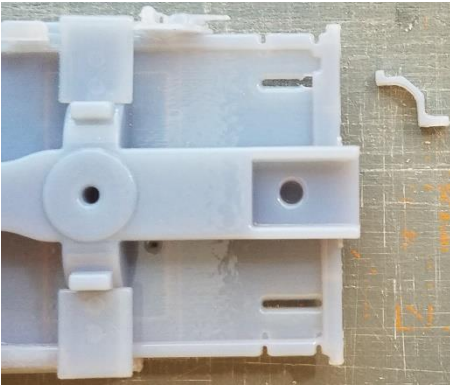


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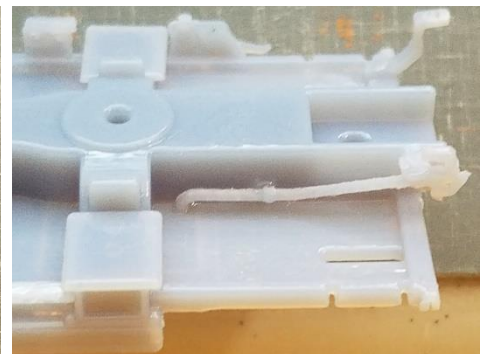
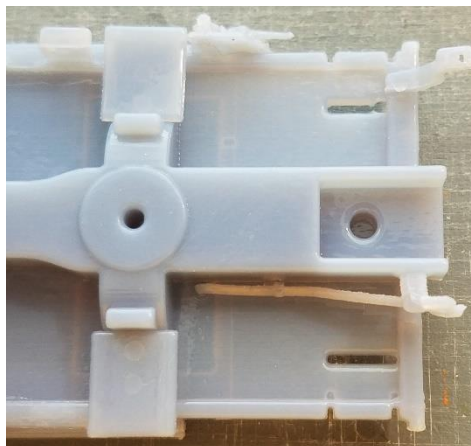
8. Glue the Bolster Caps in the positions as shown. Make sure the Cap is flat to the bolster.



9. Glue the Cut Level Hanger in the position as shown.

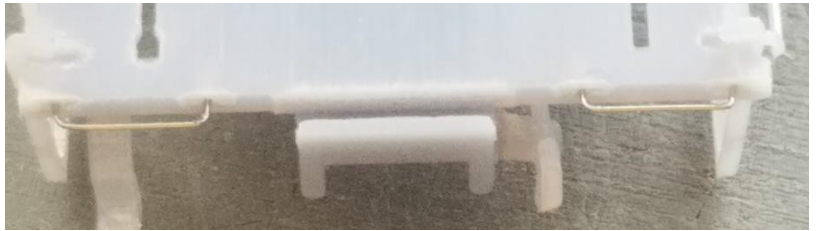


10. Glue the Air Line in the position as shown. The end of the Air Line should fit into the small hole next to the center sill and bolster. On the opposite end, the bottom of the bracket should be flush with the bottom of the center sill.

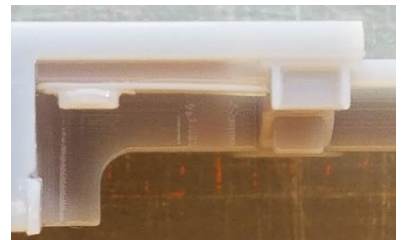
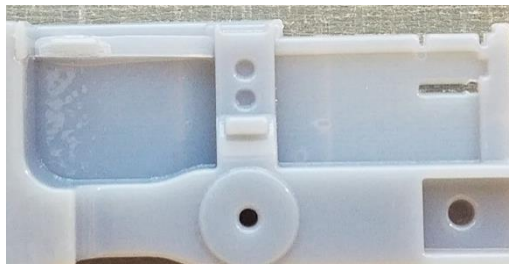


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11. Glue the Grab Irons in the locations shown on the end sill. There are small holes to accommodate the grab irons. The Grab Irons are located in Bag C. The other contents in Bag C can remain there until later.



12. Now move to the opposite end of the car and repeat gluing all of the parts except the Brake Ratchet. Be sure to get the remaining Caps in the correct position. Cap with Tag below.

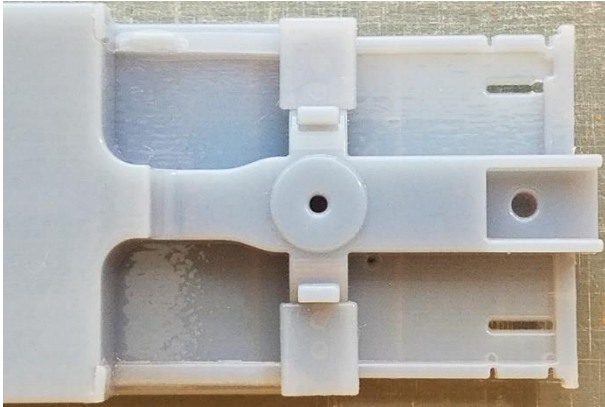


13. Smooth Cap.

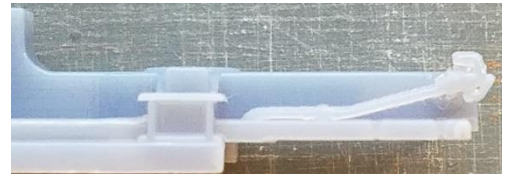
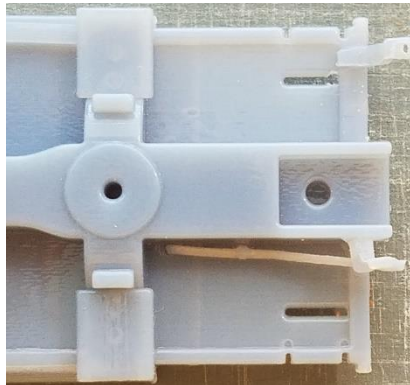
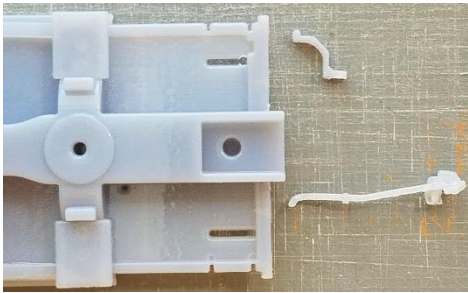


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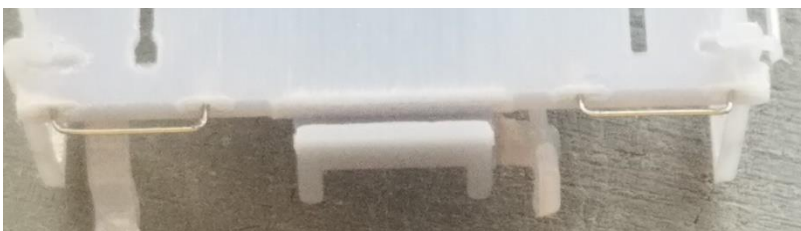
14. Bolster Caps.



15. Cut Bar Hanger and Air Line.

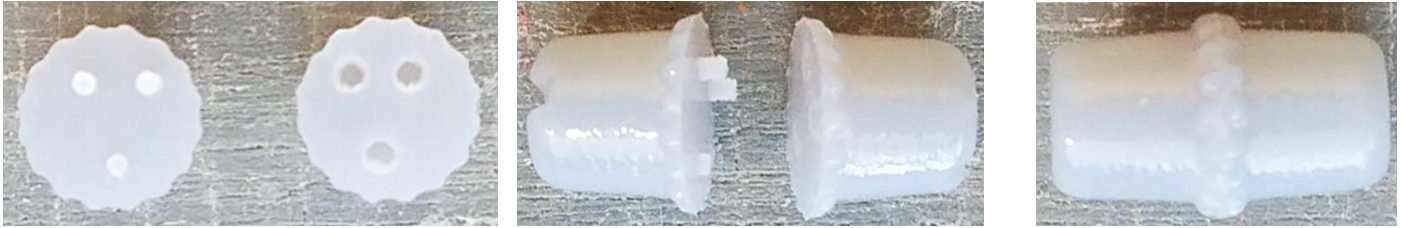


16. Grab Irons on End Sill.

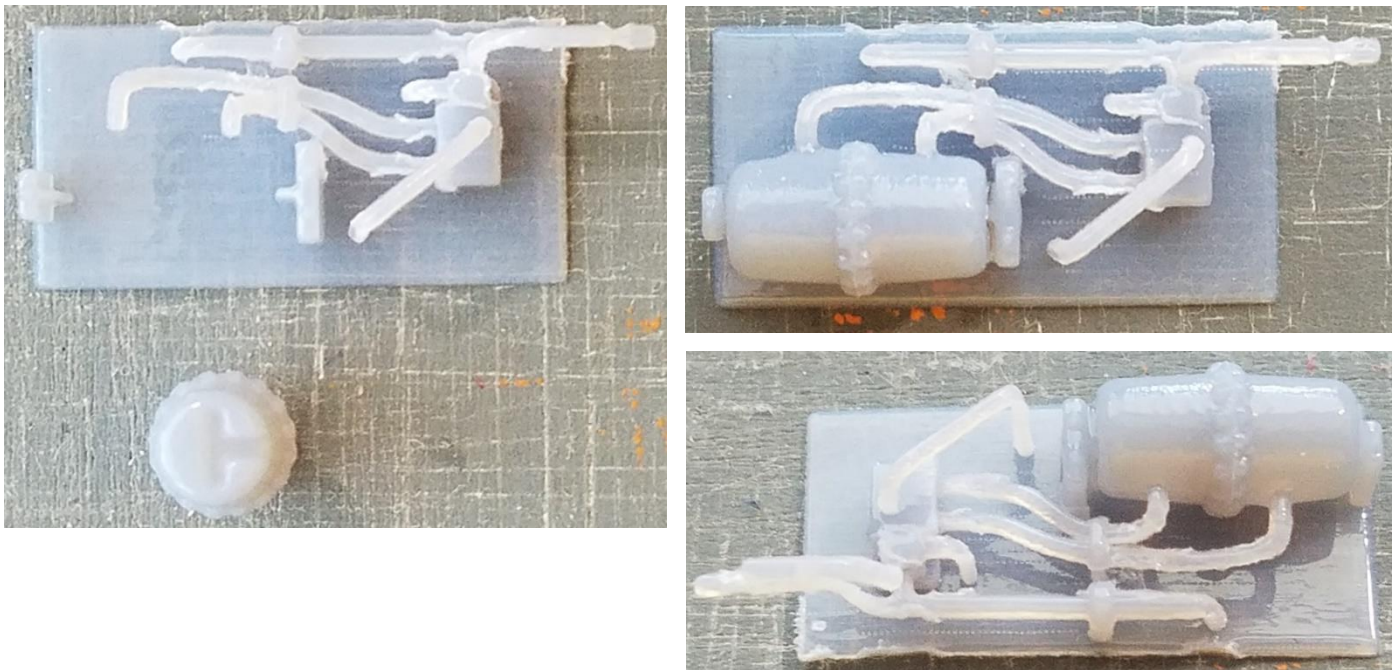


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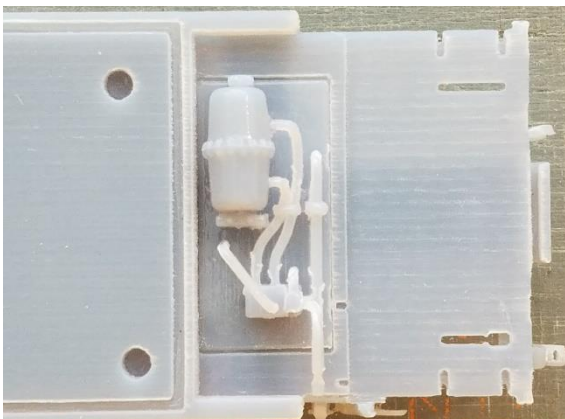
17. Assemble the Brake Reservoir by gluing the two halves together. Note the asymmetric location of the pins and holes on each half. The two parts only go together one way.



18. Mount the Brake Reservoir to the Brake System. There are slots on the ends of the Reservoir to match up with the ribs on the Brake System. Make sure the Reservoir is level. Once seated, use a toothpick to apply a small amount of CA to join the piping to the Reservoir.



19. Glue the Brake System to the Well Bottom. Be sure to center the part as shown.



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20. Glue the Well Sides to the Well Bottom. The easiest way to do this is as follows:

a. Center the Side to the Bottom as shown.



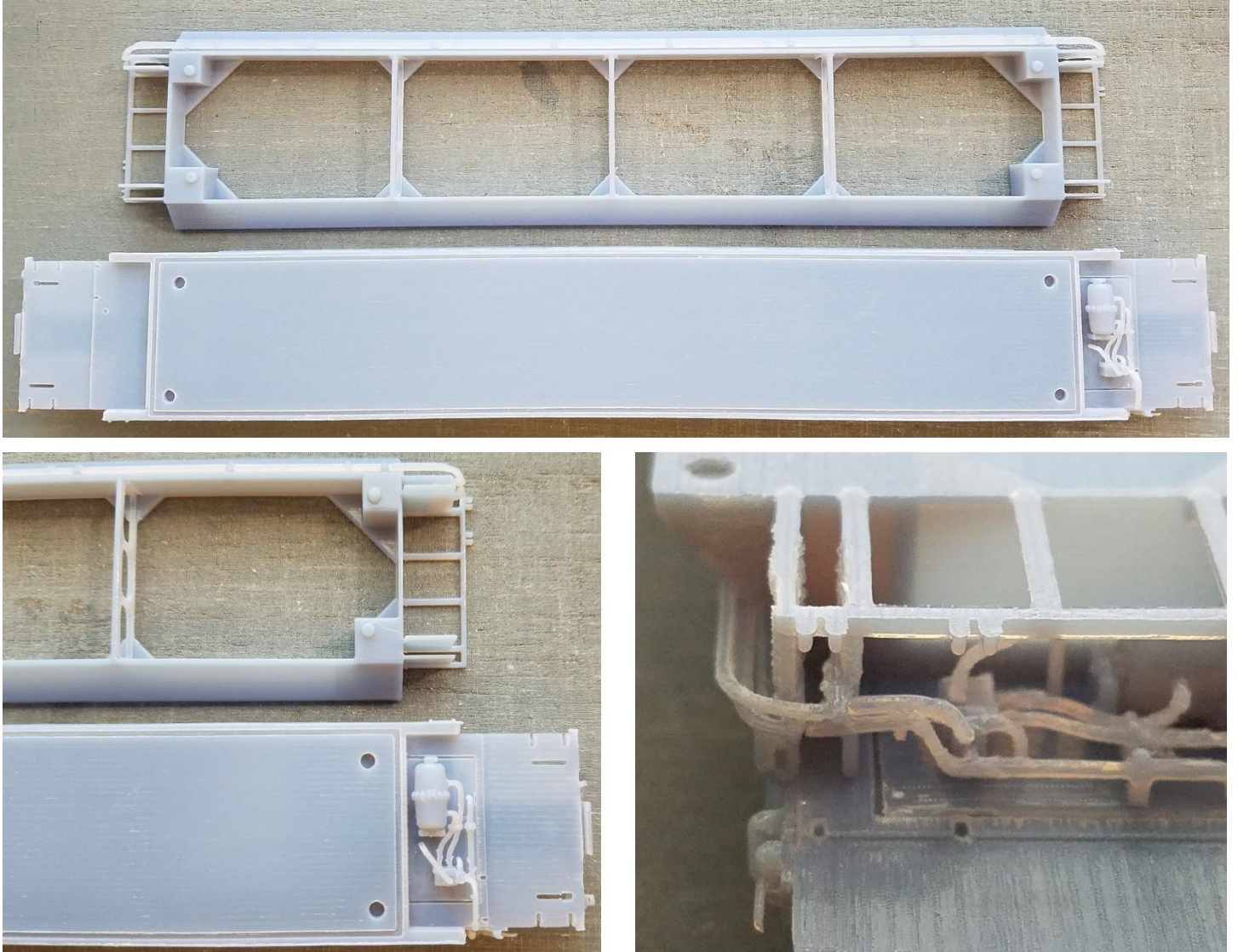
- b. Once you are happy with the alignment, use the fingers of your non-dominant hand to hold down one half of the Side firmly to the Bottom.
- c. Now use your thumb of the same hand to raise up the other half of the Side. The Side will bend very easily. You only need to raise the Side up enough to apply and spread CA to the Well Bottom using your dominant hand.
- d. Practice these steps without gluing the parts once or twice to make sure you are comfortable proceeding using the glue.
- e. Once one half is glued in place, spin the Well Bottom 180 degrees and repeat the gluing procedure. This way you will continue to apply and spread glue with your dominant hand.



- f. Don't worry about getting glue applied to the entire center. As shown above by the lighter area in the center, this will not be possible. Avoid bending the Side too sharply trying to get glue coverage in the center, as the side may break.
- g. Now repeat these steps to apply the opposite Side piece to the Well Bottom.

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21. Arrange the Well Bottom and Well Middle sections where the asymmetrical pins and holes line up correctly. This ensures the piping on the Well Middle is on the correct side. When placing the parts together the first time, carefully watch the piping from the Brake System to make sure it lines up correctly with the piping on the Well Middle section. If needed, you can use a toothpick to gently move the piping to fit properly. Apply glue to the Well Bottom along the recessed perimeter gap and the holes. The recessed gap helps to keep glue from oozing out the side.



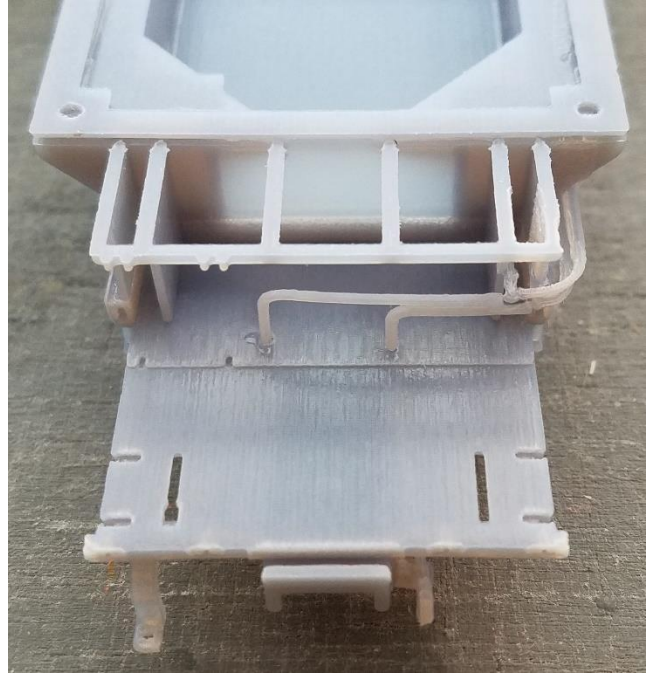
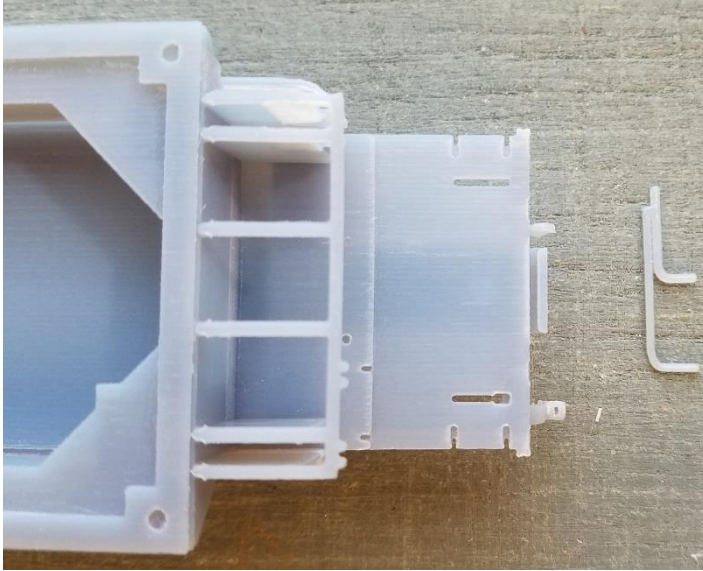
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22. Glue the Well Top to the larger Well Bottom section. The pins are symmetrical so either way is acceptable.

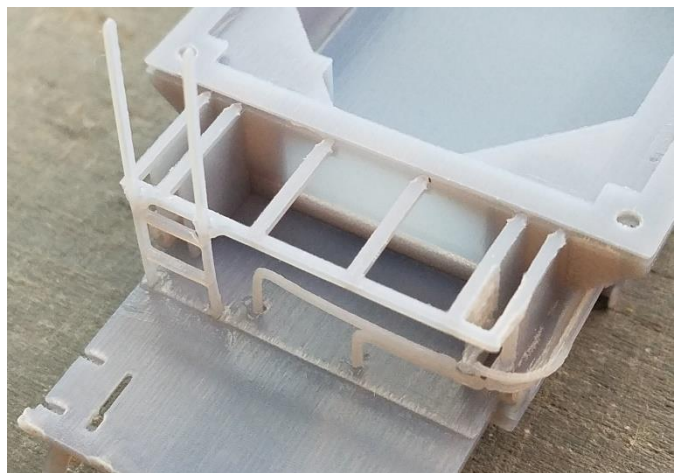
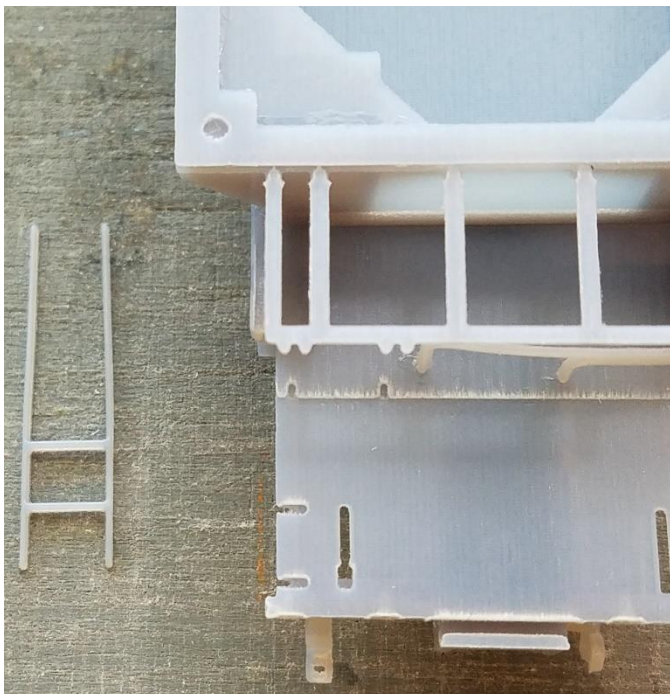


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23. Glue the Brake Pipes to the opposite end of the Brake System. There are small holes in the platform for the vertical pipes to line up with. Angled needle nose pliers or tweezers will really help to hold the part in place.

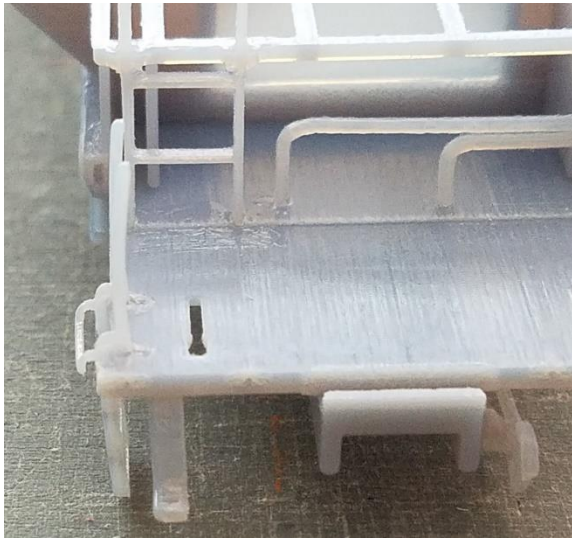
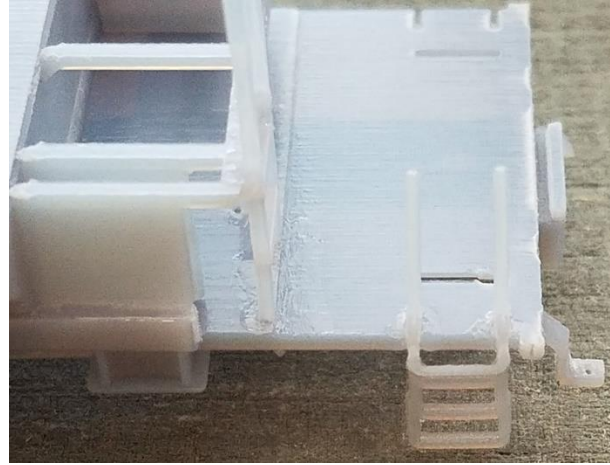
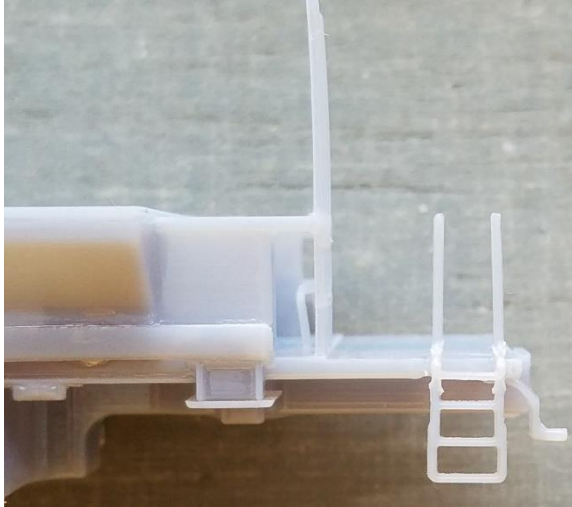


24. Glue the Platform Ladders in place using the notches in the lower platform and locating tabs on the upper platform. Repeat for the opposite end.



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25. Glue the End Ladders into position. The ladder will fit into the notches on the end platform. Keep the ladder vertical when viewed from the side and the end.

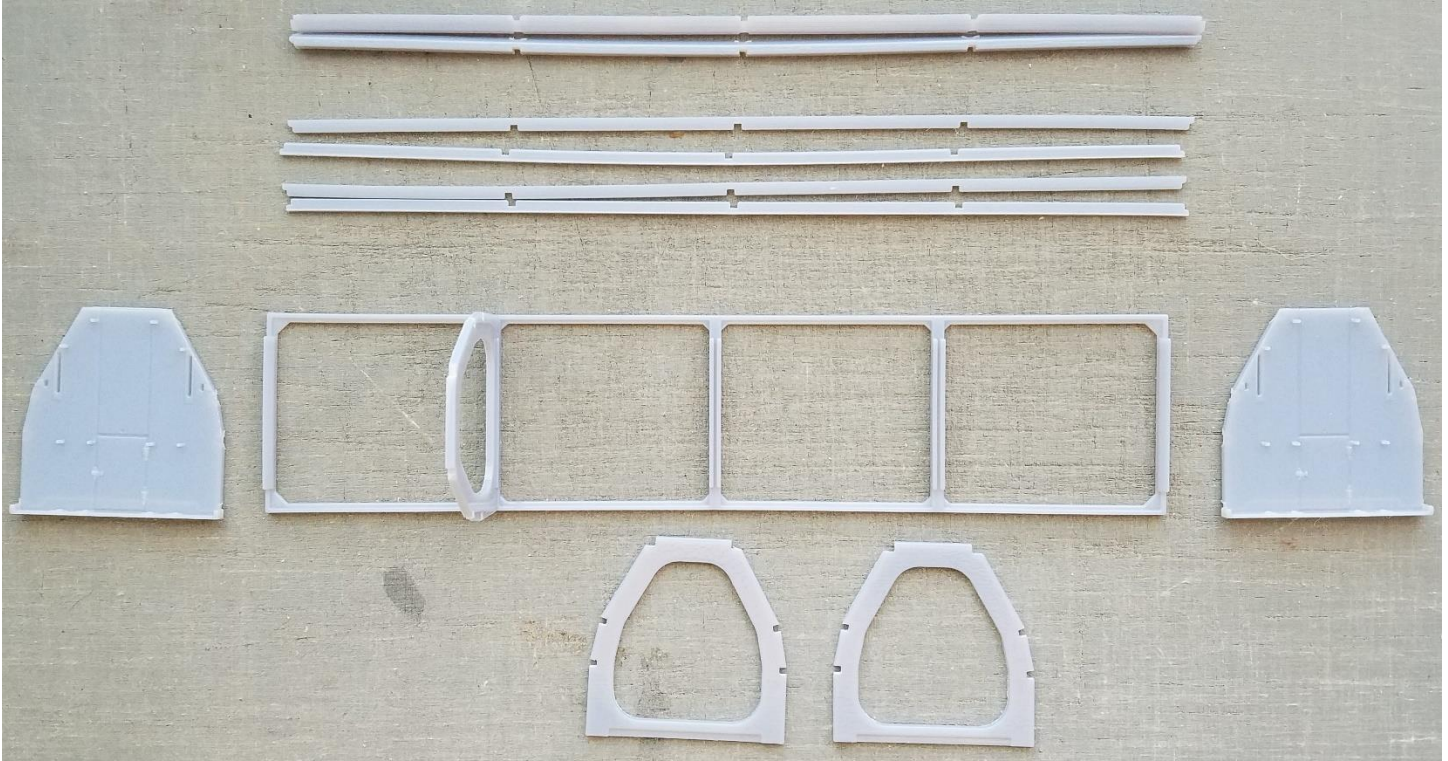


26. Repeat for the remaining three ladders.
27. The Well section is now ready to be primed and painted and can be set aside for now.

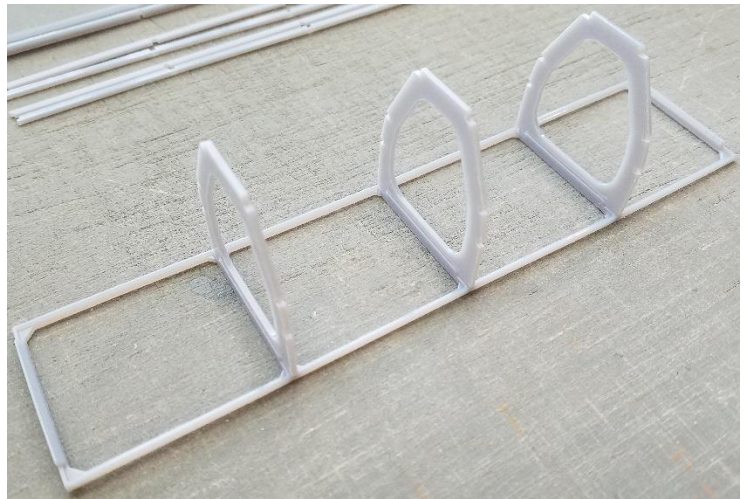
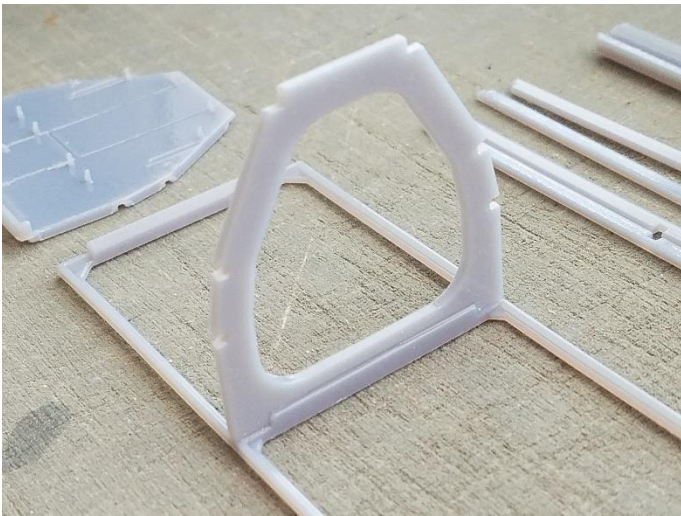
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Canopy Assembly

1. Lay out the parts shown below from Bag D and the large wrapped pieces.

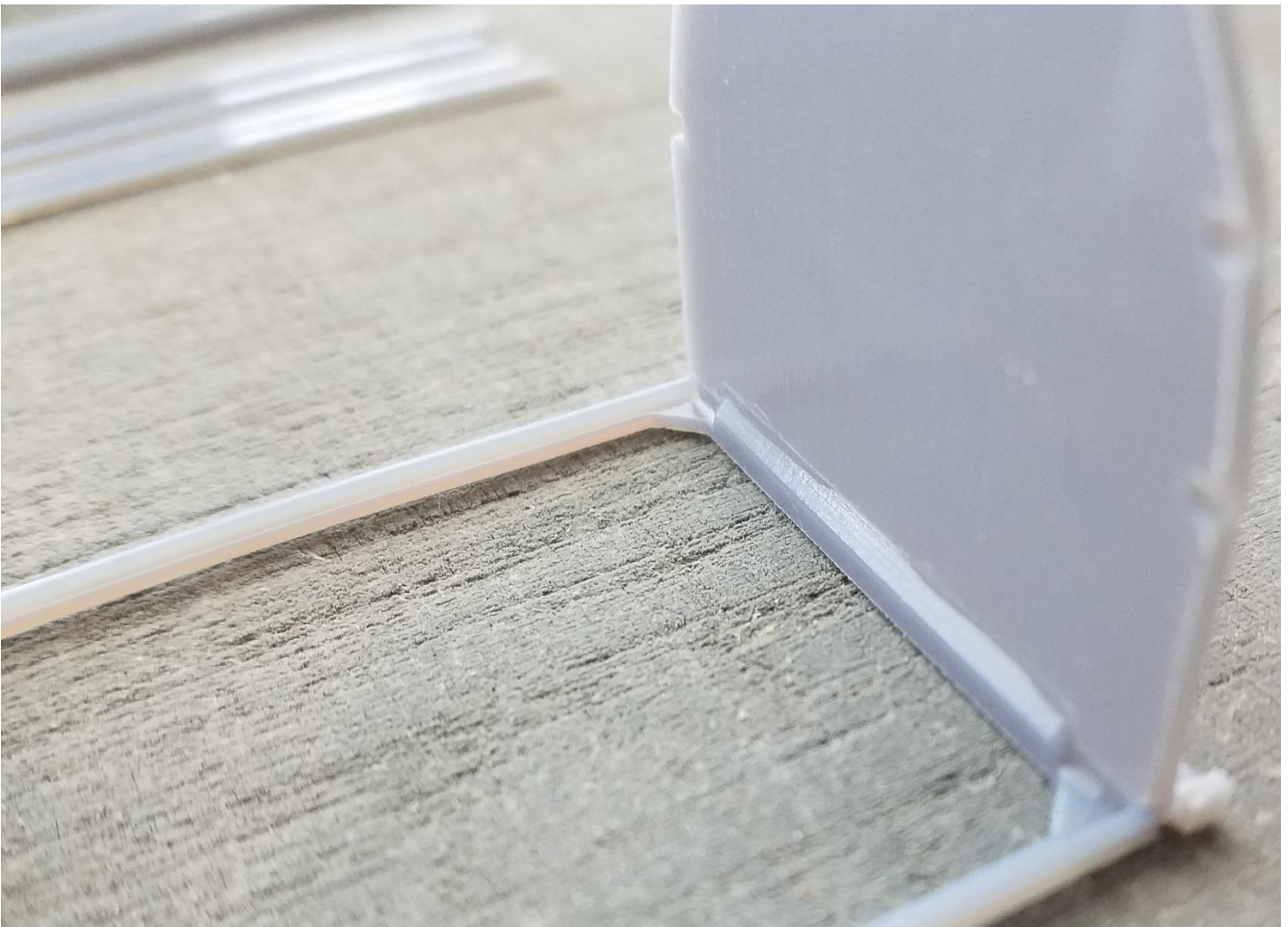
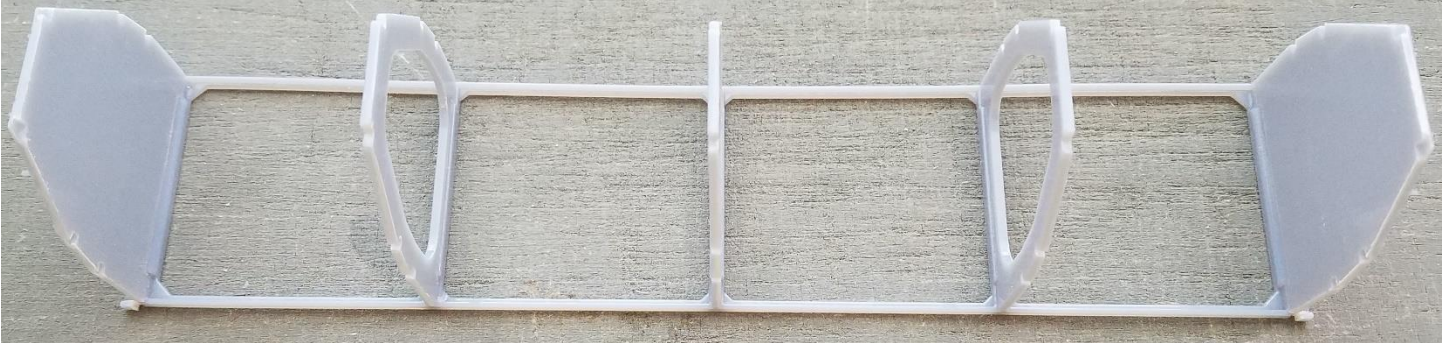


2. Glue the center bulkheads into the Canopy Bottom. Make sure the Bulkheads are vertical and pressed flush.



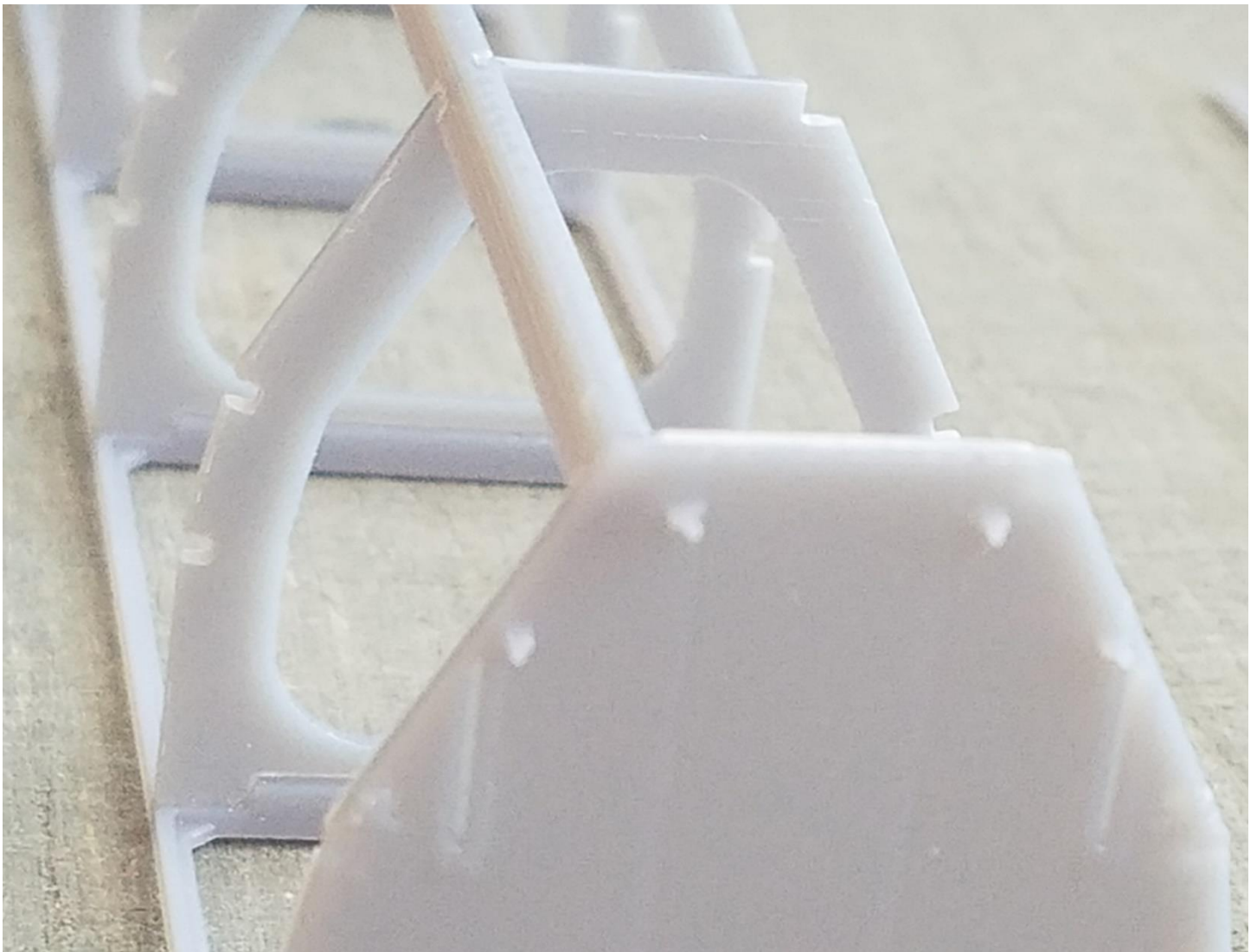
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3. Glue the End Bulkheads into position. Again, ensure the End Bulkheads are vertical and that they are flush to the Canopy Bottom.



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4. Glue the Top Stringers into position. Be sure the Stringers fit flush to the Bulkheads. Use a file or sandpaper if needed for a smooth flush fit.



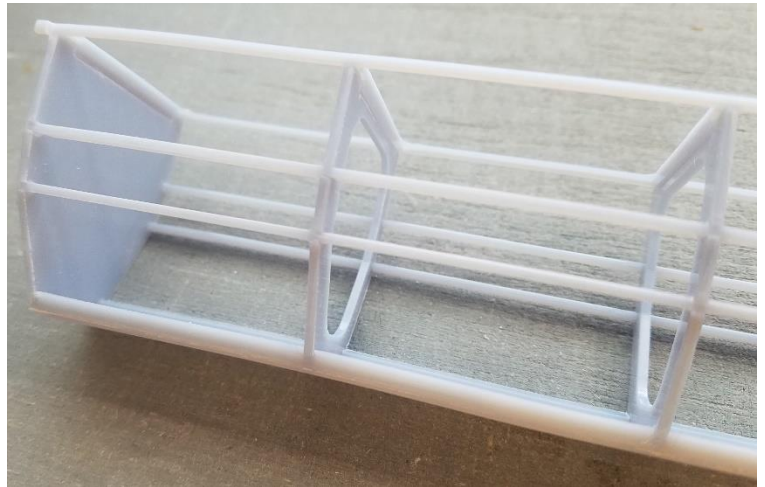
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5. The Roof will lock into position on top of the Stringers and Bulkheads. Make sure the Roof sits flush. When satisfied with the fit, remove and glue into position.



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6. Glue the Side Stringers into position. The Side Stringers should sit flush with the Bulkheads.

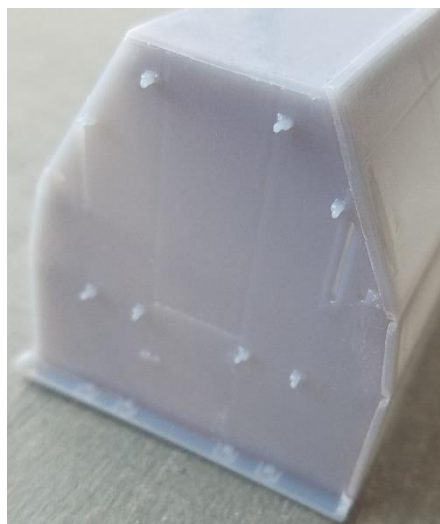
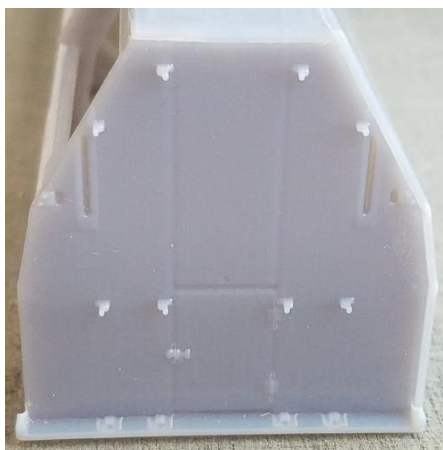


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7. Place a Canopy Side piece against the Canopy Structure. While holding the bottom, gently bend the top into the Structure. Check to make sure the side fits correctly. The ends can be filed or sanded if the Side piece is too long (overhangs the ends). The top may rise slightly above the roof. This is normal and will be addressed in a later step. Carefully bend the side back to flat, but not all the way.

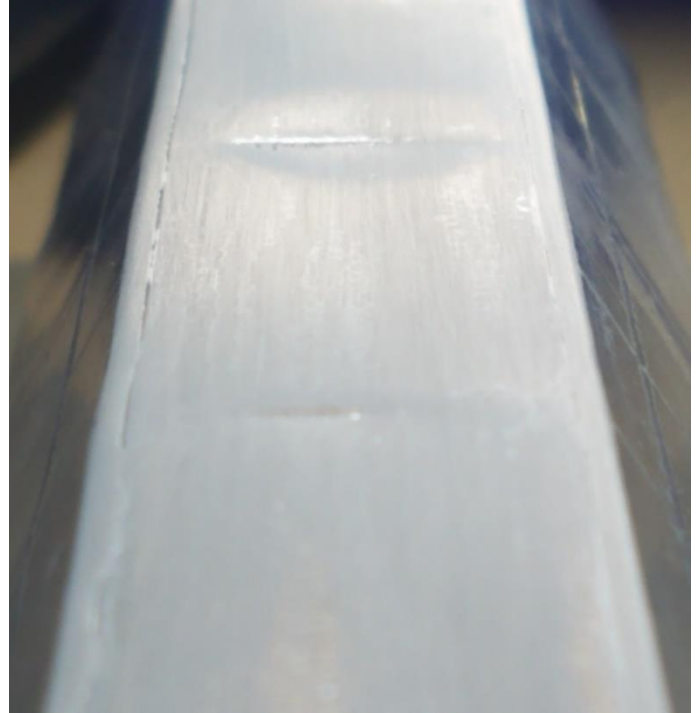


8. Apply CA to the Structure then place the Side into position on the structure, making sure the bottom of the side is lined up with the bottom of the End Bulkheads.
9. Press the Side firmly to the Structure starting at the bottom then the middle, and finally at the top.



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10. Repeat step 7-9 for the other Canopy Side.
11. With both Canopy Sides glues in place, use a file to remove any portion of the Sides that extend above the Roof. Try not to put file marks on the roof.
12. Wet sand the roof using 400 grit paper. For best results, lay the paper flat, and place the Canopy upside down on the paper to do the initial sanding. Wet the paper and check the progress of sanding often. For low spots, hold the Canopy and sand by hand to even the Sides with the Roof.

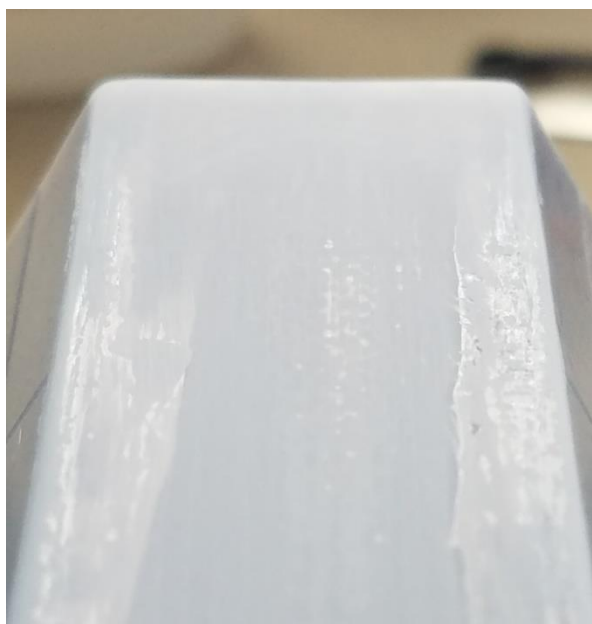


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13. Run a small bead of CA along any gaps that exist between the Canopy Sides and Roof, and smooth out with toothpick. Allow 10 minutes for the CA to cure before proceeding. We have found that the CA works much better than traditional hobby filler with the acrylic polymer material our models are produced from.



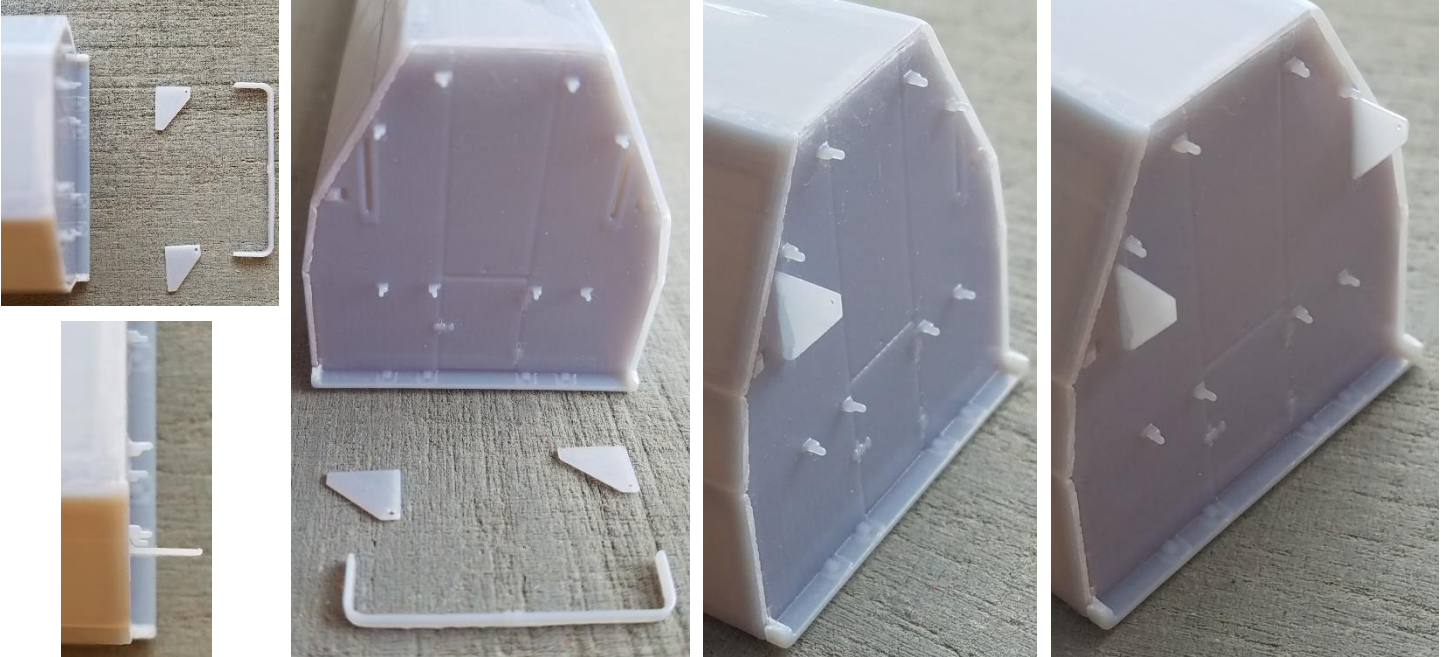
14. Wet sand the Roof for a few seconds with 400 grit paper, then switch to 800 or 1000 grit paper.



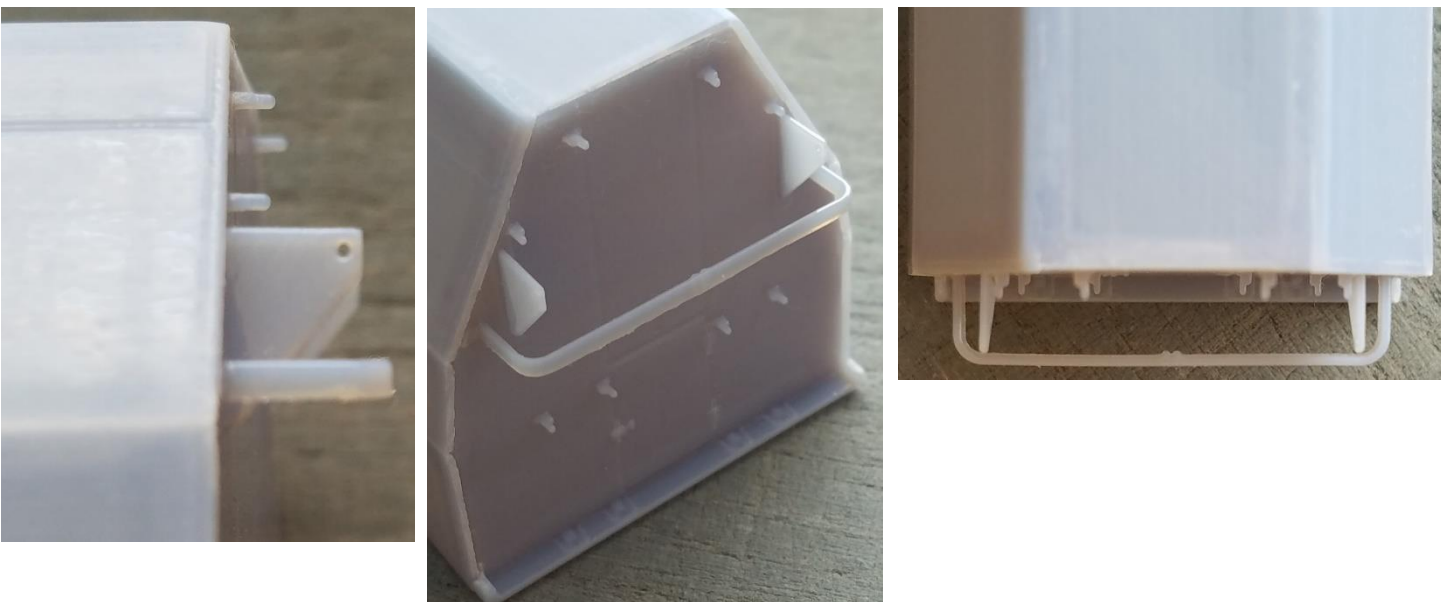
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15. Remove the 2 Safety Bars and 4 Lift Tabs from Bag E.

16. The Lift Tabs fit into the recessed slots on the End Bulkheads. Glue the Lift Tabs in place as shown. The Lift Tabs should be perpendicular to the End Bulkhead.



17. The Safety Bar fits into the small recessed rectangles outside the Lift Tabs. Glue into place, making sure the Bar is perpendicular to the End Platform.



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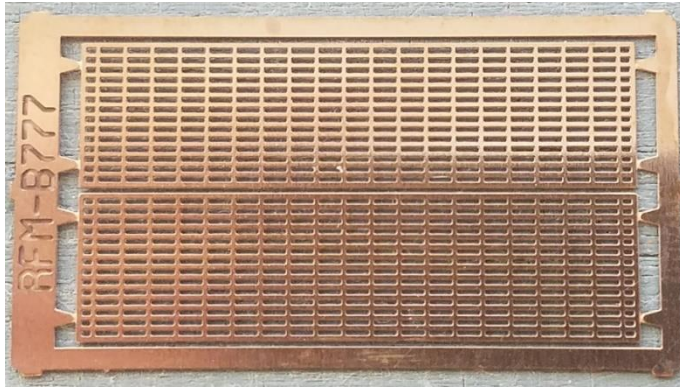
18. Test fit the Canopy on the Well. The pins on the bottom of the Canopy should easily fit into the holes on top of the Well. If there are any high spots on either assembly that prevent a smooth even fit, use a file to remove the high spot and re-fit the assemblies.
19. The Canopy is now ready to prime and paint.



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Metal Preparation

1. Remove the Etched Platforms and Etched Cut Bars from Bag C. Please note that 2 small stainless steel brackets will remain in Bag C.
2. Remove the Platforms from the tabs.



3. Bend the handles of the Coupler Cut Bars 90 degrees so they are perpendicular to the main body.



4. Now remove the final 2 pieces from Bag C and place into a small container, along with the Platforms and Cut Bars. Add hot water and some dish soap to the container and stir to remove any residue or oils from the metal parts. Drain and rinse twice, then dry.

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Priming and Painting

1. Railfan Models uses and recommends Tru-Color paints, but you can use any brand of paint you are comfortable with. Tru-Color paint numbers used are: TCP-005 WHITE, TCP-007 PRIMER, TCP-018 GLOSS, TCP-077 SILVER, TCP-093 OXIDE BROWN, and TCP-805 FLAT BLACK. If you chose to paint the wheels, we use TCP-076 RUST, TCP-805 MATTE ORANGE RUST, or TCP-807 MATTE BROWN RUST, but any rust color will work.
2. We highly recommend that you prime all of the parts before you paint them.
3. Remove the remaining parts from Bag B, C and E. All of the parts that should be primed are shown below.



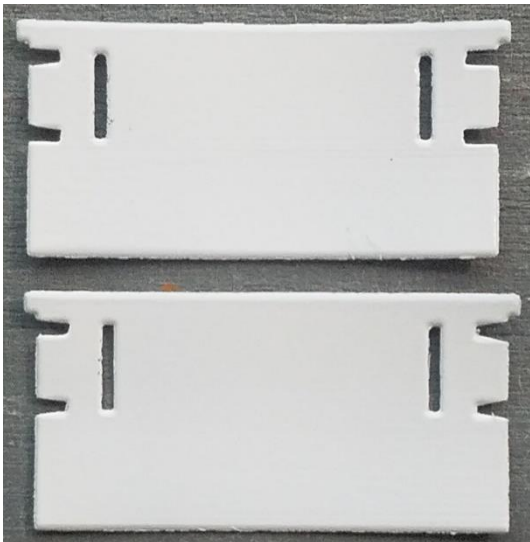
4. After priming, paint all parts OXIDE BROWN except the thin Platform Ends shown above at left.

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5. Paint the top part of the Canopy Ladders with Gloss White as shown below.

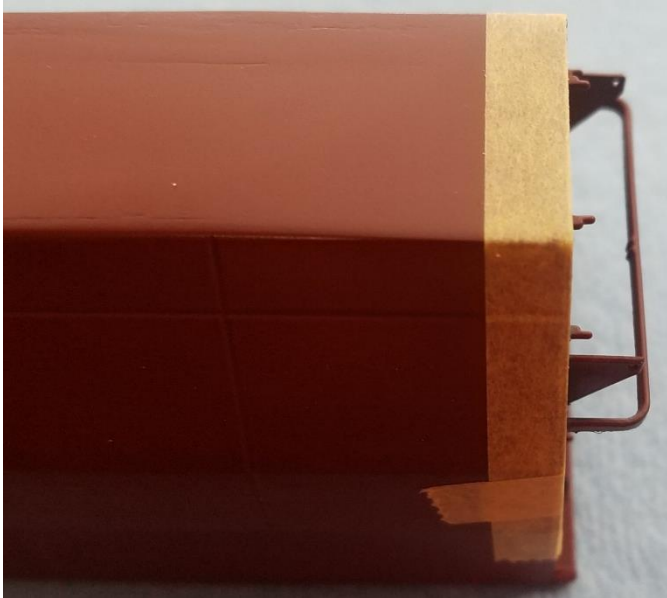


6. Paint the Platform Ends with Gloss White.



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7. Mask the Canopy Ends as shown below. Please note paper has been omitted for clarity on where to mask. Paint the area inside the masking (the top part of the Canopy Ends) with Gloss White. Also, please note the very bottom tips of the Lifting Tabs should be masked as well, but is not shown in these photos.



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Safety Reflectors

1. This step is optional, unless you want the car to look modern or post 2005. If you want to model the car as it appeared from 1993 to 2005, you can skip the next section.
2. Remove the Safety Reflectors from Bag G.
3. There are 3 sizes of reflectors, but only the smallest (and most numerous) will be used.
4. Remove each pre-cut Reflector by sliding the tip of a hobby knife under the corner and gently pressing the strip to the blade of the knife.
5. Lift the reflector off the sheet and place into position using the photo below. There are 9 reflectors on each side, and both sides use the same positions.



6. Use the end of a toothpick to hold the Reflector in place as you twist the hobby knife blade away.
7. Use the end of the toothpick to burnish the Reflector in place.
8. Repeat steps 4 through 7 until all of the reflectors are in place on both sides of the car.

Decals

1. Remove the Decals from Bag G.
2. Trim each Decal as close to the printed area as possible without cutting into the printed area of the decal.
3. Use small needle nose pliers or tweezers to hold the decal while soaking in water for 20 to 30 seconds. Let stand a few seconds then place the decal between your thumb and fore finger.
4. Partially slide the decal off the backing just enough to grab the clear backing with the pliers or tweezers.
5. Slide the decal back on the backing, then place in the appropriate position on the Well or Canopy per the photos in this section.
6. Slide the decal off the backing with a toothpick and use a small paintbrush to absorb any excess water and press the decal flat against the part.
7. After all the decals have been placed on a side, apply a setting solution to the decals and let dry 10-15 minutes.
8. Apply the decals for the opposite side using the steps above.
9. Spray a Clear Gloss coat over the entire sides of the Well and the entire ends of Canopy to seal the Decals and the optional Reflectors if used.
10. Allow the Clear coat to dry before proceeding.

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Well



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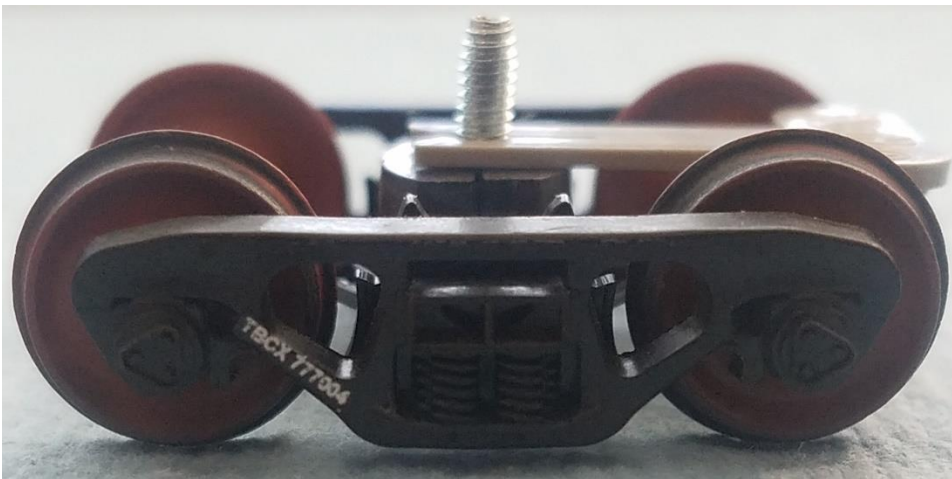
Canopy

Both ends of the Canopy are the same, with the exception of the "A END" and "B END."



Trucks

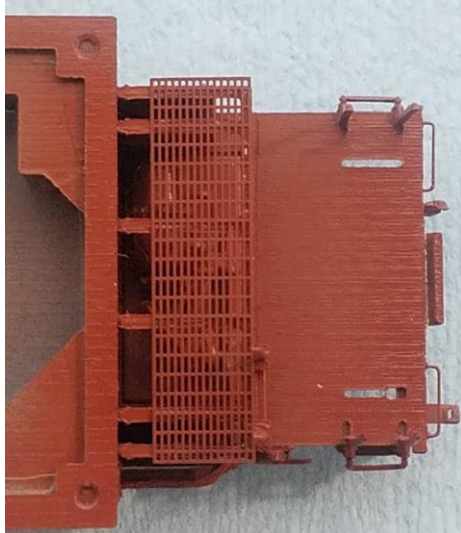
Both sides of each truck frame should be decaled as shown below. The decal is labeled #4 on the decal sheet. You can also paint the wheelsets a rusty color if desired at this time.



BOEING 777 COVERED WELL CAR ASSEMBLY INSTRUCTIONS

Final Assembly

1. Use a toothpick to spread a very thin film of CA on the upper walkway structure, then place the painted Etched Walkway in place as shown.
2. Repeat for the opposite end.

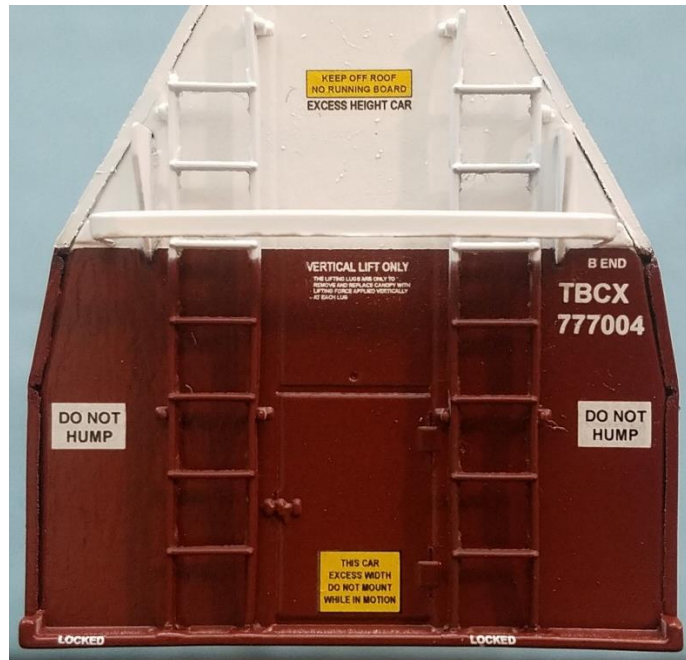
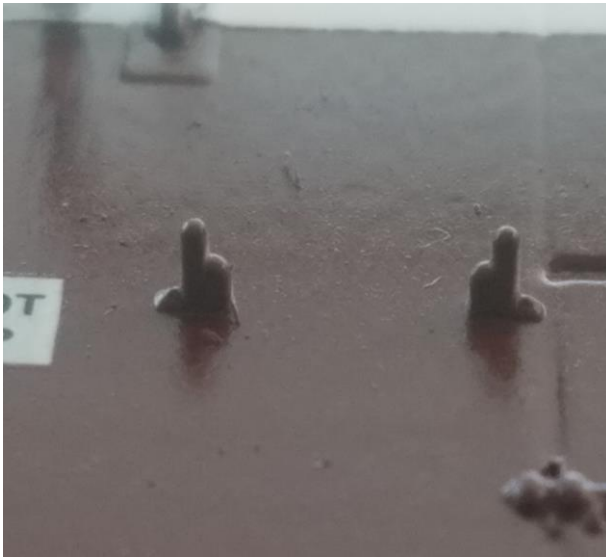


3. Apply CA to the end platform and spread evenly with a toothpick.
4. Slide one side of the White End Platform into position against the ladder, and roll the Platform down to look as shown.

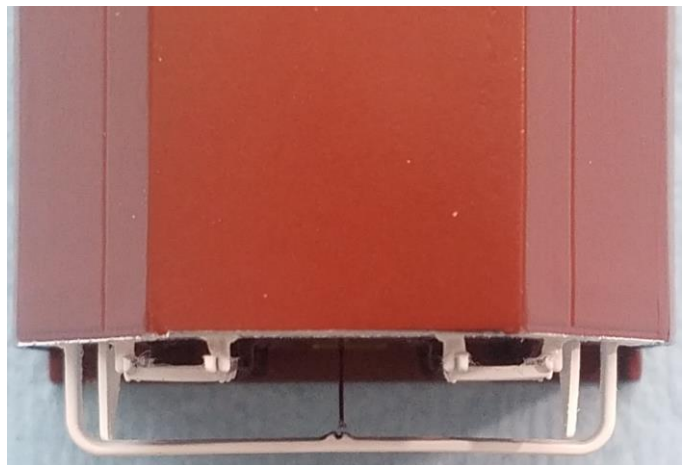


BOEING 777 COVERED WELL CAR ASSEMBLY INSTRUCTIONS

5. Place a small amount of CA on the ladder stanchions where the ladder rests on the notches. Also place a small amount of CA where the ladder bottom touched the base of the canopy lip. Work on one ladder at a time.
6. Note that there is a Left and Right ladder for each end of the Canopy. Press the correct Ladder into position where the CA was applied.
7. Repeat for the remaining ladders.



8. Use a #80 drill bit to deepen the dimple on the Canopy Ends. Do not drill all the way through the Canopy End, but just enough to allow the Brace to fit securely.
9. Using small needle nose pliers or tweezers, lightly coat the ends of the Safety Bar Brace and place one end of the Brace into the hole on the Canopy End, and the other between the notches on the inside of the Safety Bar.



BOEING 777 COVERED WELL CAR ASSEMBLY INSTRUCTIONS

10. Place the Ladder Connector as shown below. Repeat for both sides.



11. The Canopy is now finished and ready to join to the Well. Test fit the Canopy with the well. The small pins on the canopy should align and fit into the holes on the Well. **Make sure you place the B END of the Canopy on the end of the Well where the Brake Reservoir and Brake System are located.**



BOEING 777 COVERED WELL CAR ASSEMBLY INSTRUCTIONS

12. Apply a bead of CA to the inside lip of the Well as shown below. Do not get CA near the edges.



13. Verify the B END of the Canopy is aligned with the correct end of the Well, and press the Canopy against the Well.

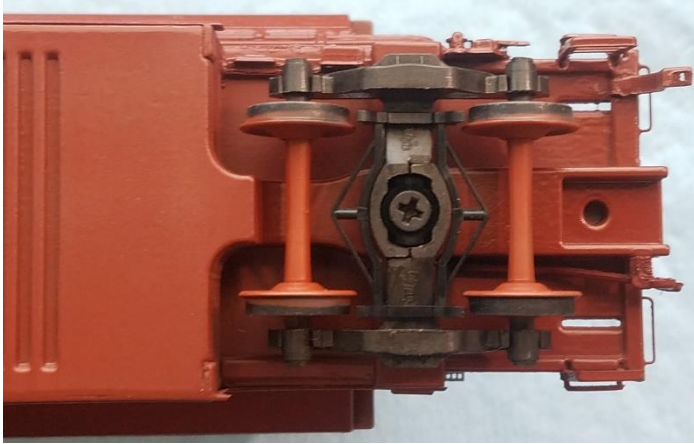


14. Remove the gray tab and the Silver screw from the trucks and replace with the supplied shorter Black screws from Bag F. The diameter of the truck screws are the same. There are larger diameter black screws in Bag F that will be used next for the couplers.

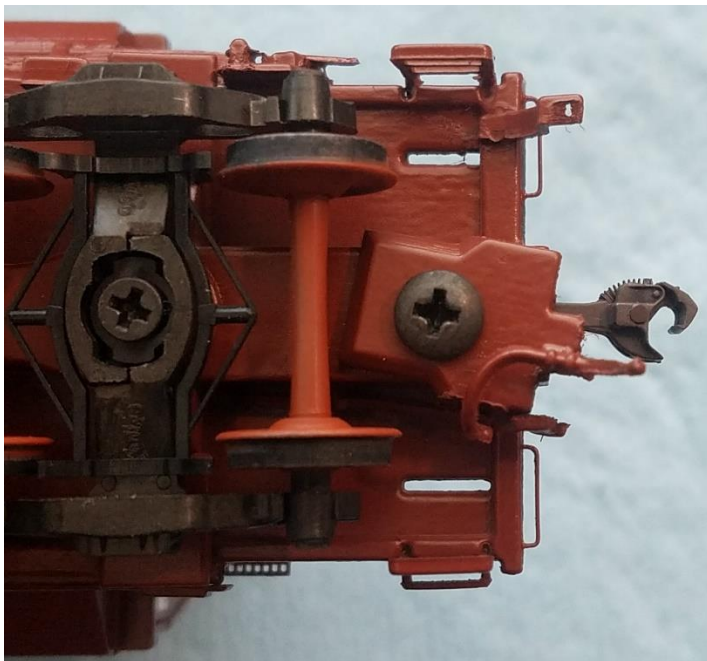


BOEING 777 COVERED WELL CAR ASSEMBLY INSTRUCTIONS

15. Turn the car upside down and secure the trucks to the bottom of the car with the Black screws.



16. Remove the Couplers and remaining screws from Bag F. The Couplers have already been painted a rusty color on the exposed areas. Place the Coupler in the coupler pocket, then the Coupler Cover, and then the coupler screw.
17. Tighten the coupler screw just enough to hold everything in place, making sure the Coupler Cover can be twisted to the side as shown.

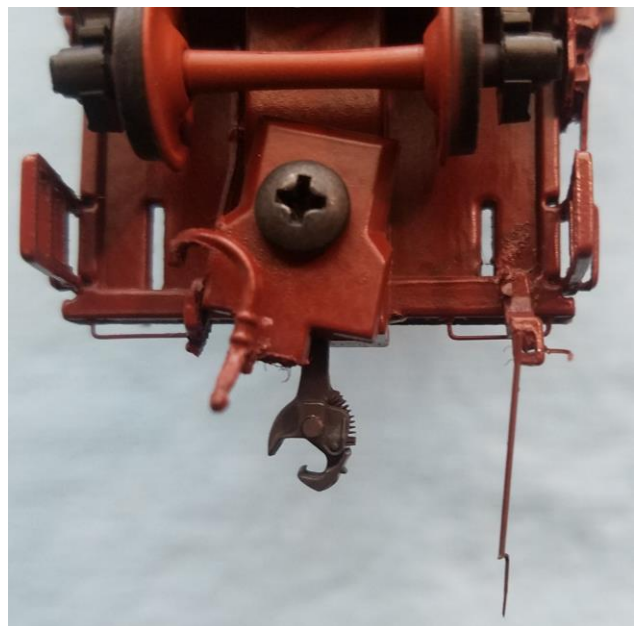


BOEING 777 COVERED WELL CAR ASSEMBLY INSTRUCTIONS

18. Align the Coupler Cut Lever as shown below and lower the handle through the hole of the Cut Lever Hanger.



19. Twist the Cut Lever counter-clockwise 180 degrees.



BOEING 777 COVERED WELL CAR ASSEMBLY INSTRUCTIONS

20. Rotate the Cut Lever clockwise 90 degrees as shown.



21. Place the end of the Cut Lever through the mounting hole on the Coupler Cover.



BOEING 777 COVERED WELL CAR ASSEMBLY INSTRUCTIONS

22. Paint the handle of the Coupler Cut Bar and the handle on the angle cock Gloss White.
23. Paint the hose extending off the Coupler Cover Black, and paint the tips Silver.



24. Congratulations, your Boeing 777 Covered Well Car is now complete! Enjoy your new model.

Storage

For your convenience, the box the kit came in can be used with the foam inserts to store your car when not in use. Place the car carefully into the foam, making sure to keep the air hoses off the foam while sliding the car in place. The thin piece of foam should be placed on top and the box lid folded closed.

