

Conowingo Models



Depressed Center Flat Car

HO Scale



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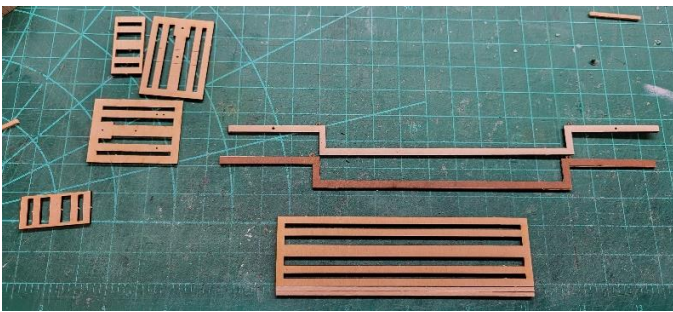
September, 2023

Thank you for purchasing this kit!

The enclosed wood tank car is fictional but based on some real-world information. It was made specifically to carry the Conowingo Models Truckable Pushboat/ Debris Boat. We don't know if there was any such car in service. The real pushboat is sitting on a lowboy.

Supplied are the basic directions. For more tips and some additional instructions, please see conowingomodels.com

BODY BASIC CONSTRUCTION



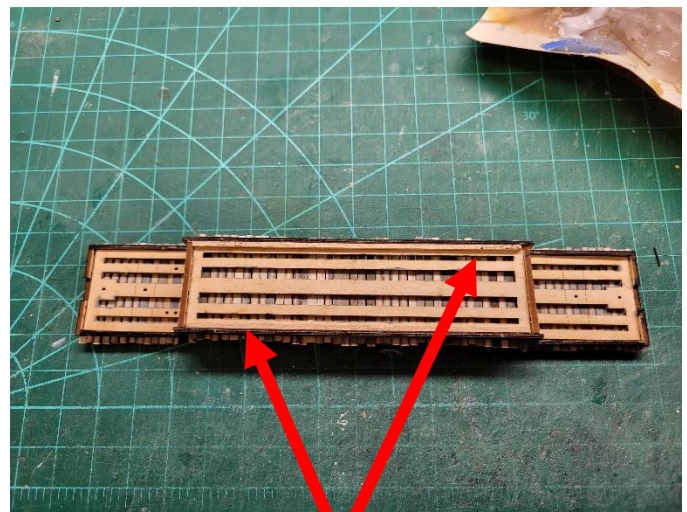
1. Start out by removing the pieces shown above from their carriers. Note there is a side with lines that denote where the bolsters and queen posts go. This is the underside. You'll also note where the coupler boxes go. Plan out where you'll want to add weights.

With this car, you have many choices. If you are adding the pushboat, we suggest adding a majority of your weight to the pushboat or other static load and supplementing the car with tungsten putty in the corners of the underframe.

The NMRA, in RP-20.1 (essentially) states that the depressed center flat car should weigh 4.875 ounces. An unweighted example we used weighed .55 ounces with Tichy trucks installed. Failure to add weight will result in a very uncooperative car that doesn't stay on the tracks.



2. Glue the laserboard (dark brown pieces) and 1/32 plywood side pieces together. (x2) Add weights to flatten and allow to dry. This forms the sides. Without these pieces, the body is very weak. The plywood and the laser cutter don't get along very well together. As a result, there may be some additional cutting needed to remove them from their carrier.

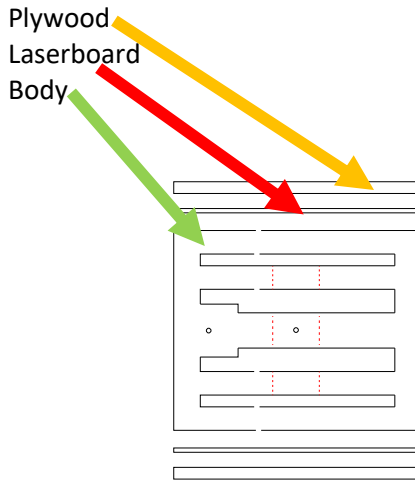


3. With the main body piece flat, fit, cut and glue into place 1/16x 1/16 stripwood on top of each side. This will add further strength. (Photo shows further steps.)



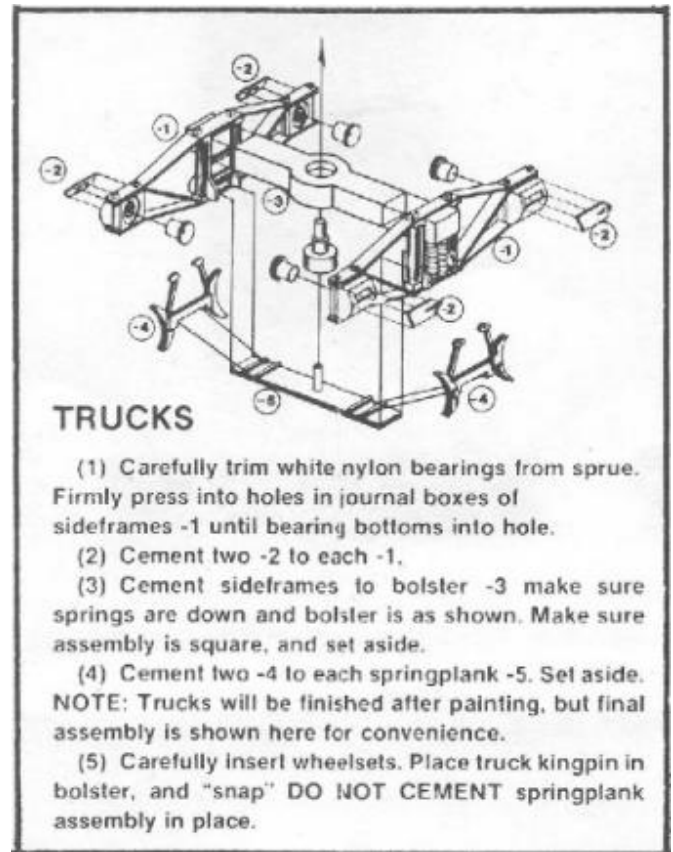
4. Taking the side pieces from step 4, assemble the body using the five decking pieces. Ensure the laserboard is on the inside. Glue them into place as shown on the diagrams immediately above and below. Diagram below is shown separated for clarity.

You may also refer to the photo in step 5 for further information. Set aside to dry.



DECKING/DETAILS PREP

5. We recommend that if you are planning on staining the car, you should stain the 3/32 wide stripwood for the deck at this time. Add a lot of weight to flatten it and let it sit for 24 hours before continuing any step that utilizes the frame. This prevents warpage. DO NOT DO THE MAIN BODY YET.
6. Take the included needle and run it through the holes in the end and side pieces and bolster pieces to ensure that there is no glue or errant laser residue in them.
7. Cut the stripwood for the decking to approximately 9.5 scale feet wide or 1 5/16 inches. You should compare them to the width of the frame and make them slightly larger. Scrape the pieces with a hobby knife, scuff them with a sanding block, cut the edges off of and add nail holes as you feel appropriate.
8. Paint the NBWs (Nut, bolt, washers), trucks, bolsters, bolster shims and detail parts as desired. They should all be flat black.
9. Assemble the coupler boxes with the couplers. (some kits)
10. Assemble the Tichy trucks (some kits) as shown to the right.



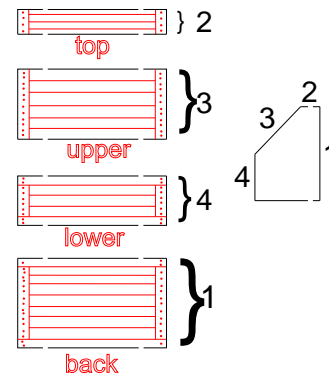
(Courtesy Tichy Train Group)

TOOLBOX ASSEMBLY

11. Take both of the 1/32 plywood toolbox end pieces and glue them to the 1/16 scribed pieces (in green below) so that the laser scribed pieces 1/32 are on the outside and the 1/16 pieces will be on the inside, centered, but even on the bottom.

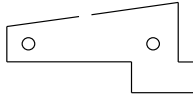


12. Assemble the tool chest as shown below. The numbers correspond to their respective positions on the end pieces.



BOLSTER PREP

13. For those that have purchased rolling stock kits from us before, this step remains unchanged. However, we've reworked the bolster pieces somewhat. Carefully cut the angled bolster pieces out and glue them together in pairs. You will end up with four pairs. Run the needle through the holes in the bolsters again to ensure they are properly aligned.



14. With the top side is up, glue down the stripwood as shown. We covered both end pieces and side rails. Ensure you leave a small gap between the pieces to prevent buckling when you paint/stain it. It looks better with spaces as well. A few not-so-perfectly-aligned pieces add life to it.
15. When finished adding the decking, Flip the bottom side up and flatten with a heavy object to prevent warping during the drying process. Be sure not to crush the side or end pieces. You may want to consider clamping the corners to something solid instead. Be careful not to crush the tiedown rings. They're fairly sturdy, but you don't want to take the chance of breaking them because they will NOT glue back into place.

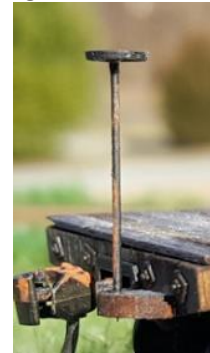
DETAILS AND FINISHING TOUCHES

16. Install the coupler boxes. We recommend applying some CA to the frame where the coupler boxes will go, followed by appropriate screws (unfortunately, the screws included with some kits are for the trucks and are too long for this application).
17. Install the brake system as shown below. You may also refer to <http://www.tc-nmra.org/TC-Library/Model%20Railroading%27s%20Dark%20Underbelly%20-%20Final%20Version.pdf> for information on brake system installation.

18. Install the trucks using the screws and insulating fiber washers (some kits). For those unfamiliar, the washers go between the truck and bolster to smoothen truck movement. Tichy Arch Bar trucks (some kits) can now have the spring planks installed. Despite the instructions, we've found that a dab of CA helps keep the spring planks in place. If the screws don't hold, add a drop or two of CA into the holes and try again.

19. Glue into place the NBWs, stirrups and detail parts. The NBWs and stirrups have cut holes where their respective parts fit. There are tons of NBWs on this little car

20. For the brake wheel, cut the head off the needle with wire cutters to a height of 4 scale feet (35/64 inch) or as desired. Glue the wheel and rod to the wood piece, sharpened end down and in the notch. We glued ours to the end of the car. Different variations are highly encouraged!



21. Add the decals and weather as appropriate.

Please share your completed photos on <https://www.facebook.com/ConowingoModels/>

See Conowingomodels.com for more unique model railroad products.

If there are any parts missing, please e-mail us conowingomodels@yahoo.com and we'll get those parts headed your way. We strive for a perfect kit, but mistakes do happen. We apologize if this happens.

Many thanks to Steve Milley, Jeff Grove and Mark Schreier for their help! Additional thanks to Don Tichy for all the parts and diagrams!

Like the design? Want to see this car developed into other things? Please drop us an e-mail and/ or visit the Facebook page to see the latest development with it.

Visit conowingomodels.com or the Facebook page often to view any newly developed rolling stock.