Heavyweight Logging Car

HO Scale

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Thank you for purchasing this kit!

The enclosed 44-foot heavyweight logging car is fictional but is based on some real-world information. There are no logs included with this kit

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

We update instructions over time to improve them, show new techniques, etc. See our website to download the latest instructions.

The instructions for this kit are a bit segmented. They are designed to keep the modeler moving forward. It won't look that way at first, because there are a lot of starts and stops associated with bracing and painting.

This kit is intended for HO customers.

For those that have built our rolling stock kits in the past, this kit will look somewhat familiar, but it has a more modern support structure that will be stronger than the truss rod kits. Art reflects reality.

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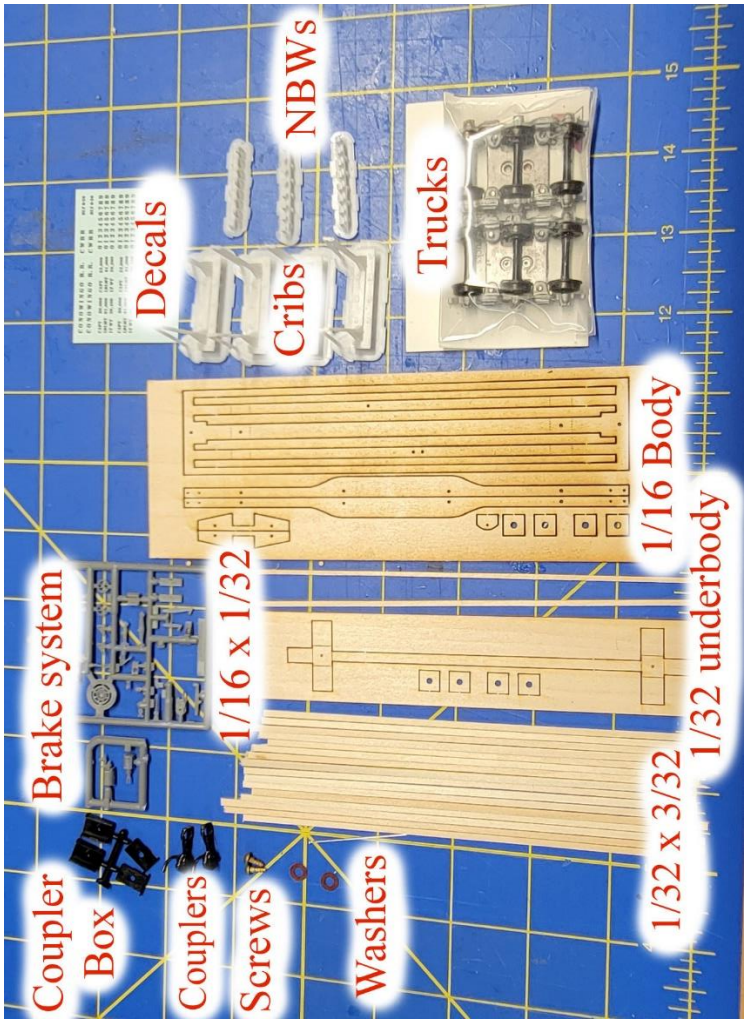
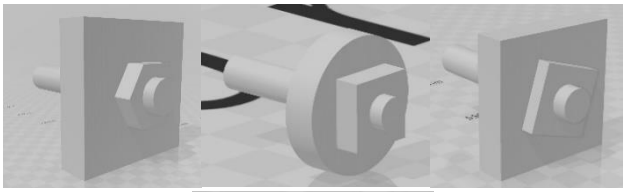
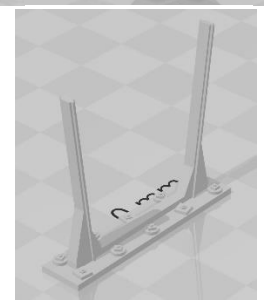


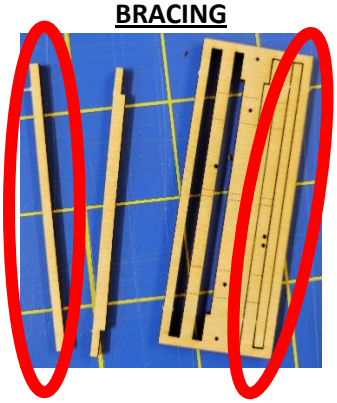
3D PARTS PREP





☐1. Pictured are the 3D printed parts. They were shipped in their carriers to help prevent breakage. Carefully cut out each piece. The top row are nut, bolt, washers (NBWs) and the bottom photo is the lumber crib. You will need 12 total NBWs, but prepare several extra because they like to go flying and disappear. Mix and match as you wish.

BRACING



☐1. Take the frame out of its carrier. Observe that one side has marked lines indicating the placement of bolsters and queen posts; this side should face downward. Additionally, you'll notice the designated positions for the coupler boxes.

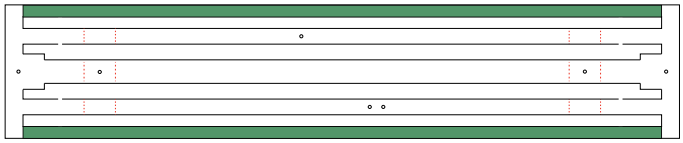
☐- Keep the two outer pieces that we have circled above.

☐2. Plan where you intend to incorporate additional weight. According to NMRA standards, specifically RP-20.1, a 44-foot model should weigh approximately 4.0 ounces.

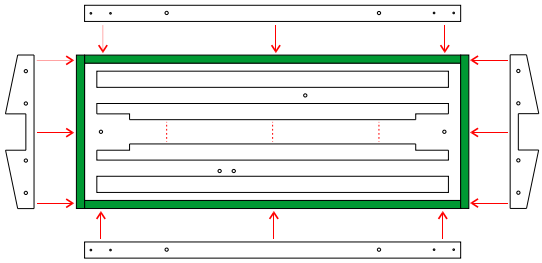
- An unweighted example equipped with the included Buckeye trucks weighed 2.3 ounces. Neglecting to include sufficient weight will result in a railcar that behaves erratically and doesn't stay on the tracks.

- However, in testing, the car performed flawlessly without any additional weights.

- Additionally, the trucks are made of soft metal. In testing we found that there is such a thing as too much weight when one of the axles dislodged and locked up. We made no attempt to fix it, because it is a display model and lack of roll is a good thing. There are screws that hold the trucks together, so this situation could probably be rectified if it happens to you.

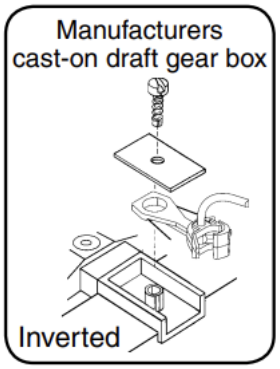


☐3. Take the two pieces we told you to keep in step one and glue them into position as shown above in green. They will attach to the underbody.

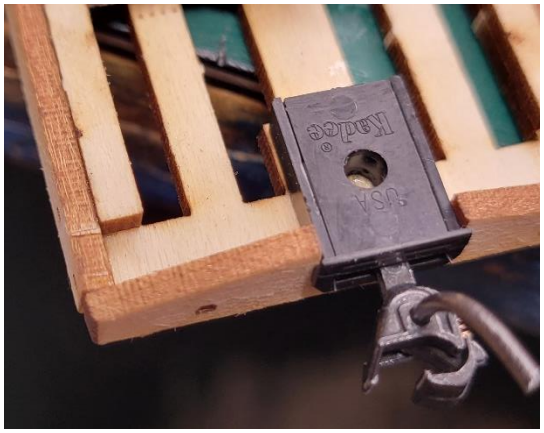


☐4. Locate the two side pieces and the two end pieces.

☐- Glue them into position vertically as shown above and below. They should be vertical. (Braces shown in step 3 not shown in either diagram or photo.)



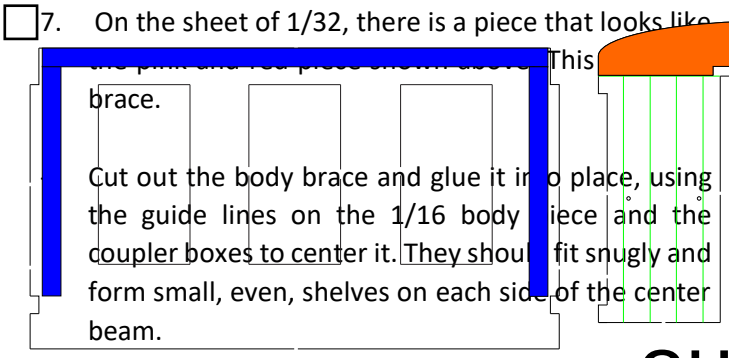
☐5. Assemble the coupler boxes as shown above**. The included screws are for the trucks, not the couplers.** Add screws if you have them.

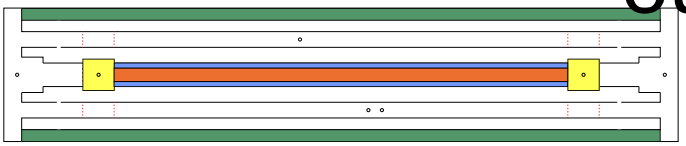


☐6. Install the coupler boxes using a glue of your choice as shown above.

☐7. On the sheet of 1/32, there is a piece that looks like the pink and red piece shown above. This brace.

Cut out the body brace and glue it in to place, using the guide lines on the 1/16 body piece and the coupler boxes to center it. They should fit snugly and form small, even, shelves on each side of the center beam.





☐8. Take two pieces of 1/16 x 1/32 stripwood (shown above in blue) and cut them to size. This adds rigidity to the underbody.

☐- Glue the two pieces of stripwood into place vertically as shown above and below.

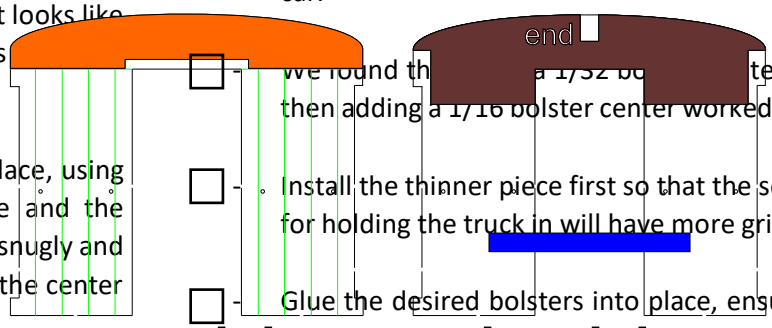
☐- The stripwood should not overlap the open area on the top and bottom sides. See photo above. The bolster center shown in the photo doesn't need to be installed until step 9.

9. Install the bolsters as follows-

☐- From the sheet of 1/16 pieces, cut out two pieces of the bolster centers (shown above in yellow)

☐- From the sheet of 1/32 pieces, cut out two pieces of the bolster centers (shown above in step 7 in yellow)

☐- We included more pieces than you should need in the event that you need to alter the height of the car.



☐- We found th a 1/32 bo ter first and then adding a 1/16 bolster center worked perfectly.

☐- Install the thinner piece first so that the screw used for holding the truck in will have more grip.

☐- Glue the desired bolsters into place, ensuring they are square and fit the body brace squarely.

☐10. Add weights and let dry.

PAINTING

Make sure the bracing is complete and dry before moving forward.

PAINT GRIMY BLACK

- [ ] - 12x NBWs (nut, bolt, washers). You will need to remove them from the 3D printed joiner.
- [ ] - Brake wheel
- [ ] - Brake components (if you choose to install them)
- [ ] - Needle
- [ ] - 2x Trucks
- [ ] - 2x Coupler pockets
- [ ] - Underside of the car (optional, it won't show)
- [ ] - 4x Stirrups
- [ ] - Sides of the car (if you want it black)

STAIN GREY

- [ ] - Top deck of the car frame
- [ ] - Support piece for the brake wheel
- [ ] - 16x 1/32 x 3/32 stripwood (multiple colors/shades)

- [ ] 1. Using masking tape, set out two lines as shown above. Tuck the ends under so they stick to your chosen surface. We use old cardboard soda cartons.

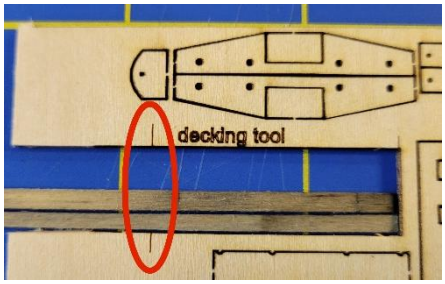
- [ ] 2. Adhere the above noted stripwood to the masking tape.

- [ ] 3. Stain the stripwood, using multiple colors and varying amounts. This will add character to the wood.

- [ ] 4. Add weights to flatten until dry.

DECKING

We haven't previously discussed using a ponce wheel to create decking nails on the deck boards. If you decide to include nails, you can add them either after step 1 or after step 4.



☐ 1. Measure and cut each piece of 1/32 x 3/32 wood to align with the frame's width.

☐ - If your kit includes a "decking tool" on the 1/16 parts tray, you can use it for this purpose. Use the highlighted notches measure proper width.

☐ - If your kit doesn't have a decking tool, cut the boards slightly wider than the deck.

☐ - Our preferred method for efficient and precise deck board production was using the Ultimation Slicer.

☐ - We prefer to take our pile of deck boards and mix them up. It ensures lots of variation in the wood colors.

☐ 2. Starting in the middle and working outward, use glue to affix the deck boards one by one. Make sure they are aligned straight and leave small gaps to accommodate for expansion and contraction.

☐ - As you approach the ends, begin adding boards to the ends and progress toward the center. This step is crucial because any gap that may occur is less noticeable when it's not at the ends. If you do encounter a gap, trim a deck board piece to fit. In the provided photo, the trimmed piece is the seventh from the top, and it blends in seamlessly.

- Do not worry about the unstained wood cuts, you will cover that up later.

☐ 3. When all the deck boards are in place, flip the body over and add weights. You want the car deck to dry flat.

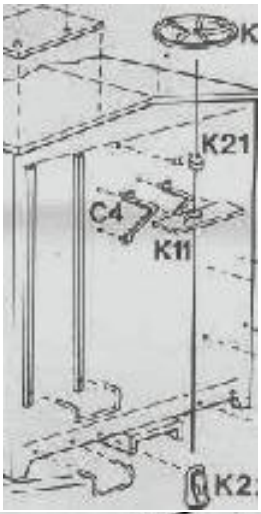
BRAKE INSTALLATION (OPTIONAL)

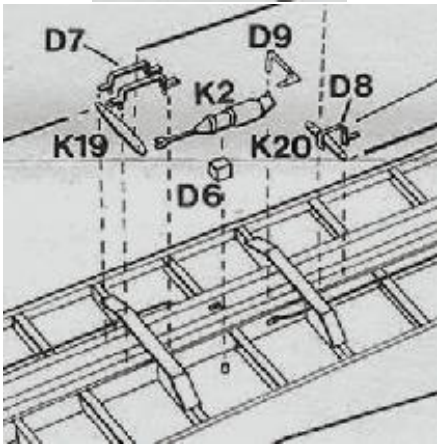
We have included the brake system installation guides from Tichy Train Group. On the pilot models, we generally don't include brakes because we're mainly concerned about the overall appearance of what goes on top of the deck, not under. We offer two things to consider-

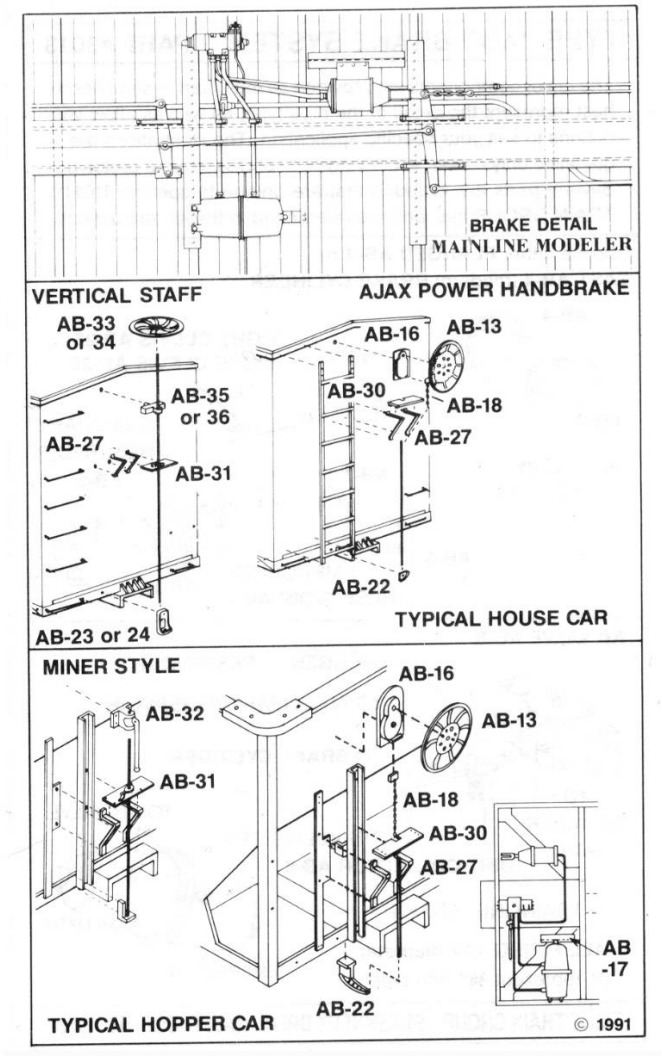
1. The brake component location and how it relates to the trucks. If the components interfere with the trucks, it will adversely affect how the car performs.

2. We found the below diagram slightly confusing, yet still helpful. Tichy has renumbered the parts since the diagrams were drawn. Ignore the part numbers and follow the shapes.

3. Do **not** install the brake wheel until the end. They will fall off, often disappearing to the floor long before the model is finished. Info on brake wheel installation can be found on the last page.

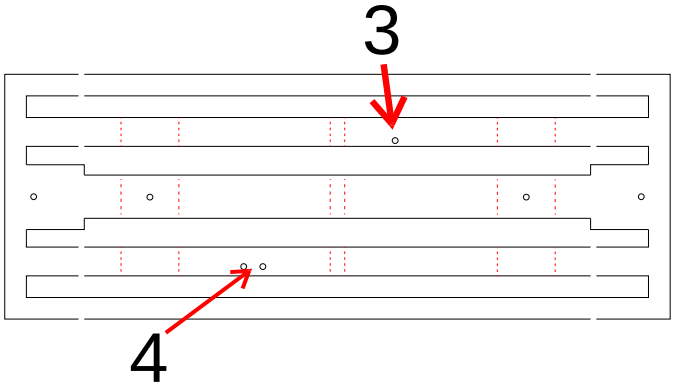






(Courtesy Tichy Train Group)

Parts 3 and 4 can be installed on the underside of the body in the locations indicated below.



FINISHING TOUCHES

1. When COMPLETELY DRY, trim the deck boards as follows-

☐- Flip the car over, so that the deck is on your table.

☐- Using downward pressure on the car while cutting will help eliminate dragging boards during this process.

☐- Using a SHARP #11 blade, cut the edges of the decking even with the sides of the car.

- If the car is still wet, the boards will drag and cut unevenly.

- If the blade isn't sharp, it will also cut unevenly.

☐- You may end up with some boards that come off during this process. Simply glue them back into place.

☐- You can also use a sanding sponge to round out the edges of the deck boards.

☐2. The side rails and end pieces can be further painted/stained and lettered at this point.

3. Prep the mounting holes on the trucks to ensure the mounting screw will go through it.

- You will notice that there are two that are equally off-center.
- You will only need one hole on each truck.

☐

☐4. Install the trucks on the bolsters using the screws and insulating fiber washers.

☐- Install the truck so that the hole you prepped is closest to the coupler.

- For those unfamiliar, the washers go between the truck and bolster to smoothen truck movement

☐- If the screws don't hold, add a drop or two of CA into the holes and try again. Work the trucks so they don't get glued into place.

☐5. Install the end bolts (NBWs) and stirrups using glue. Either CA or white/wood glue seems to work equally well. The NBWs have holes cut for them. There are also holes cut to serve as guides for the stirrups. Orientation of the NBWs doesn't matter, however they should be random and not all oriented the same way.

☐6. For the brake wheel run the pin through the brake wheel. 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!

☐7. Do any necessary paint touch-ups and final weathering.

LOG LOAD TIPS

If you desire to build up a wood log load, here are a few tips.

- ☐- Find the straightest twigs you can.
- ☐- Get similar diameter twigs.
- ☐- Cut them to approximately the length between the cribs and ends of the car.
- ☐- Random sizes of the approximate same length would be more realistic. You'll notice a few of ours look a little out of place.
- ☐- One thing we didn't do, but you may want to consider is putting your selected twigs in a 250°F oven for 30 minutes to kill any bugs/eggs that may be embedded in the wood.
- ☐- We cut our twigs with a chop saw as we found a hobby knife to be inadequate.
- ☐- Mix and match the different diameter twigs to figure out how to best lay the logs in the cradle.
- ☐- Once happy with the arrangement, pull the logs out in layers so that you can "layer" them as we glue the logs together.
- ☐- Glue the logs together so that the glue doesn't show.

Please share your photos on our Facebook page!
https://www.facebook.com/ConowingoModels

Once again, thank you for your purchase!

If there are any parts missing, please e-mail us what you need to complete the kit and we'll send it your way. Suggestions for improvement are welcome. Please join us on Facebook and post your photos!

See the Conowingo Models website
www.conowingomodels.com
Or our Facebook page
https://www.facebook.com/ConowingoModels/
for more exciting, funky buildings and rolling stock for your model railroad!

Many thanks to my family, Jeff Grove, Steve Milley and Mark Schreier for their support!