

Missouri Pacific Historical Society

HO ART Flour Car Kit Instructions

History of the Missouri Pacific 120000, 130000 and 140000 boxcars

Missouri Pacific's 120000, 130000 and 140000 series boxcars were former 40' ice bunker reefers that were rebuilt by a number of shops from 1968 through 1975.

The initial group of MP boxcars were numbered 112000-112599. These were originally American Refrigerator Transit (ART) 91300-91699 and 39300 through 39699 (former TRAX 12000-12599) built by Pacific Car & Foundry in 1954. An identical group of N&W boxcars were also modified from this series being numbered N&W 49000-49219. This first group was rebuilt from 1968 through 1971 by the ART shops in St. Louis with MP 112400-112499 and N&W 49170-49219 in this group being rebuilt by St. Louis Refrigerator Car Company. External changes were the removal of the ice hatches and running board and an 8' wide and 8' 4" high opening was made for new Youngstown freight doors.

A second group of (ART) 29000 and 39000 reefers originally built by Mount Vernon Car Company in 1952 were rebuilt by the ART shops in St. Louis from 1971-1972 becoming series MP 112600 - 113084.

Pacific Car & Foundry built a third group in 1957, ART 37000-37249 and these were converted to boxcars by St. Louis Refrigerator Car Company (MP 113085-113159) and the ART shops in St. Louis (MP 113160-113334). These cars all had the signature horizontal rivet seam running the length of the .10" side sheets.

Not related to this kit, but part of these rebuilding programs was a group of reefers bought from Fruit Growers Express (FHIX 41241-41460). These were built by Pacific Car and Foundry in 1956 and rebuilt by St. Louis Refrigerator Car Company in 1974-1975 in the MP 114330-114679 series. The last group (Pacific Car and Foundry in 1957) were purchased second hand in 1972 from Packers Car Line (PCL 4000-4399) and converted by Midwest Freight Car, Clinton, Illinois to boxcars MP 114000-114329 in 1972 and 1973.

Initially the cars were assigned to flour, cement, and detergent loading with some being used to haul explosives. A few cars were converted to MoW service after being retired from freight service with one car being repainted as HERBIE 1 to promote safety on the Union Pacific.

Background to the Model

The model was initially conceived as being a one-piece resin body and a pilot body shell was made by Charlie Duckworth for casting from a 1954 ART kit designed by Stan Rydarowicz. After the body was completed contact was made with a resin caster but the price per casting put the project were the Missouri Pacific Historical Society would make the models too expensive and the society would see little profit. Charlie then looked into using the existing Intermountain ART reefer kits the society had on hand. What the models needed to bring them up to the 1952-1954 design was the correct diagonal panel roof, 'roller pin' style ends and 8' wide Youngstown doors made as replacement parts. MPHS member Mike Huddleston was contacted and Mike volunteered to design and print the replacement parts for this project. Charlie contacted Hubert Mask and Mask Island decals were made specifically for this kit and allow for prototype stenciling showing "Flour Loading Only," "Cement Loading Only," and "Detergent Loading Only". Hubert also added multiple re-weigh locations on the MoPac and

variables seen on these cars such as leasee and return to agent stenciling.

Being only 13' 7" from the railhead to the top of the roof make these models considerably shorter than the standard 40' boxcars built in the late 1930's through the 1950's and add a visual variation to a train consist, class yard or an industry track.



MP 112991 in flour loading assignment. Car shows COTS stenciling and the ACI label. The cut down side and end ladders were only on the 'A' end of the car.



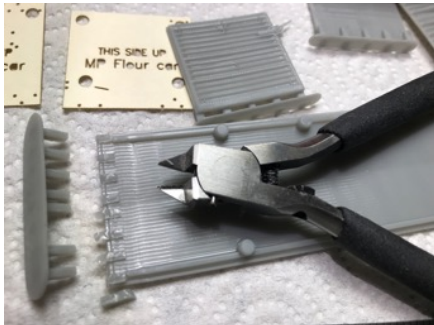
MP 112212 assigned to detergent loading. Early photo as no COTS has been applied.



MP 113026 assigned to cement loading. March 1977 reweigh date with the COTS and U-1 black square and yellow dot applied. The original ladders are shown here on the 'B' end.

Steps to Building the Model

Remove printing blocks from back of the five 3D parts with a file and sprue nippers. The material is soft and doesn't require much sanding.



Moving to the InterMountain parts, remove outer area of floor with a microsaw - this is the outer most part with the tabs. Dress the outside areas of the floor with 220 emery paper.



Measure from both ends of the car sides 16' HO feet, pencil in a vertical line and removed all reefer door details, rivets and horizontal rivet in the areas marked to enable the freight doors to sit flush on the carbody. You can use both a flat Exacto blade and a single edged razor blade to remove these details.

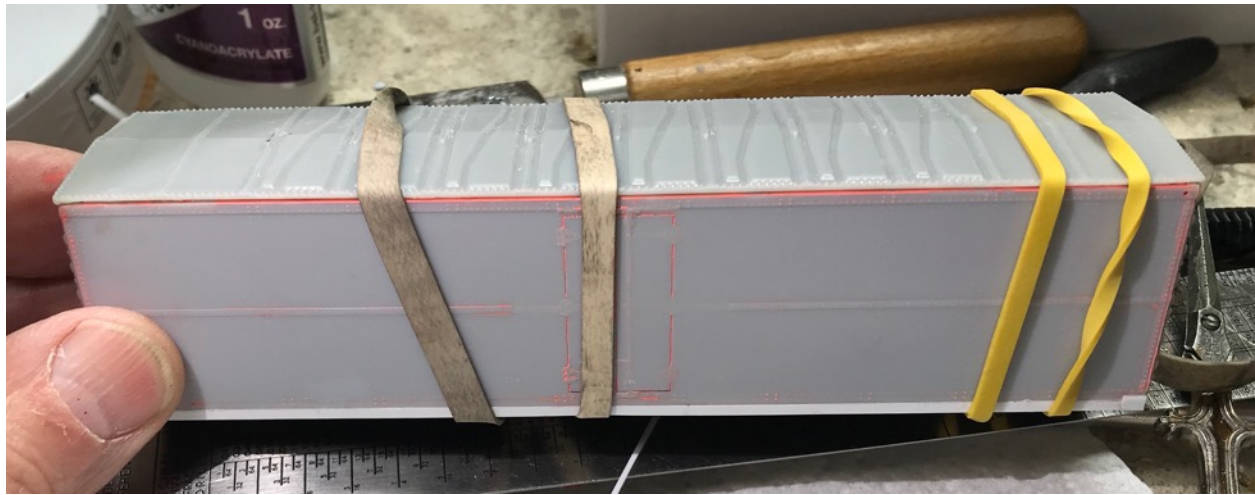


Strip the factory paint off the carbody; Scalecoat II paint remover was used as the factory applied orange paint is somewhat thick.

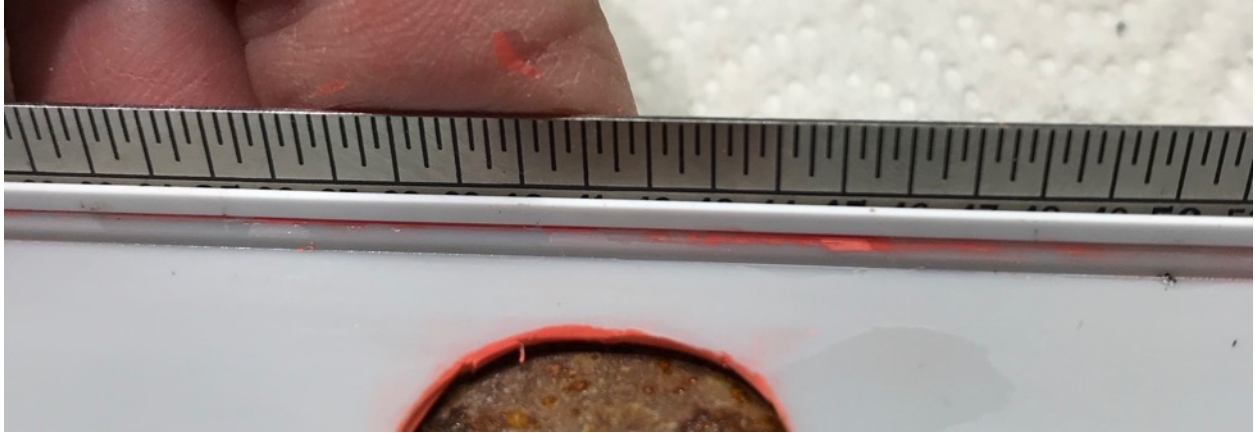
Using 220 Emery wet/dry paper thin the two freight doors to a prototypical thickness taking care in not breaking the handles.

Glue weights inside the carbody.

Using the two templates, drill from the back of the resin car ends the holes for the ladders, handholds and brake assembly and glue the A and B ends to the carbody. Hole placement was copied from the ART kit. The top holes on the A end for the long ladder don't need to be drilled since the prototype ladders were reduced in height. There is also one hole almost hidden by an alignment pin on the A end. A short line on the template points to this hole.



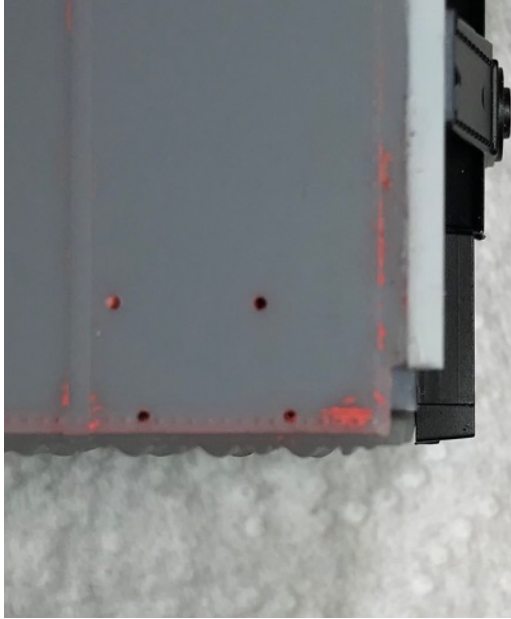
Glue and center the resin roof to the carbody. Roof is glued on with canopy glue or other white wood glue so there's enough time to center it. Use rubber bands to hold it in place until it's dry. Ensure there's a slight gap between the roof and top of the carbody. If the ends are slightly bowed upward now, use ACC to glue them to the carbody.



Using Evergreen 2" x 6" styrene (Item number 8206 - modeler must supply) glue to the bottom length of the carbody. The bottom edge on the bottom of the Intermountain carbody is very narrow; initially use Tamiya Ultra-Thin plastic glue to tack the 2" x 6" along the bottom of the sides using a metal ruler, press the ruler against the sides and Evergreen strip to ensure its straight with the sides and adjust as necessary before it dries. Once you are satisfied with its placement of the 2" x 6" finish gluing the strip. After the plastic glue dries, now add a bead of gap filling cyanoacrylate glue to strengthen the joint from the back side. Note which end of the floor is the 'B' end and glue to the kit's floor to the carbody. You may find that the floor needs to be sanded once again on the 220 Emery paper to get it to fit.

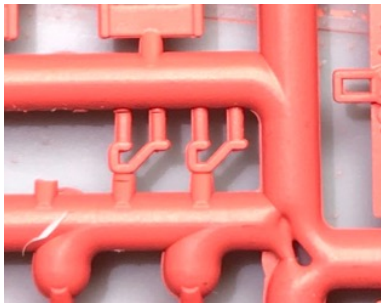


Once the floor is glued, make the small reinforcement plate as shown here from Evergreen 2" x 6". Its 12' 6" long with angles on each end. This piece is centered with the door opening and the two vertical rivet lines on either side of the door.



Build up the ends to fill the gaps in the corners with 2" x 6" and sand to where its flush with the bottom. Fill any seams with Tamiya plastic putty and file and sand to blend in with the carbody. If you plan to use straight hand holds filling in these holes with styrene. If using the kit's hand holds ignore filing these holes.

Add the thinned doors and glue to the carbody and then glue the door guides on the carbody. The door guide are made from Evergreen 1" x 3" strips (Item Number 8103 – modeler must supply). Both guides are 17' 4" long. Look at the photos of the completed model for the placement of the guides and stops.



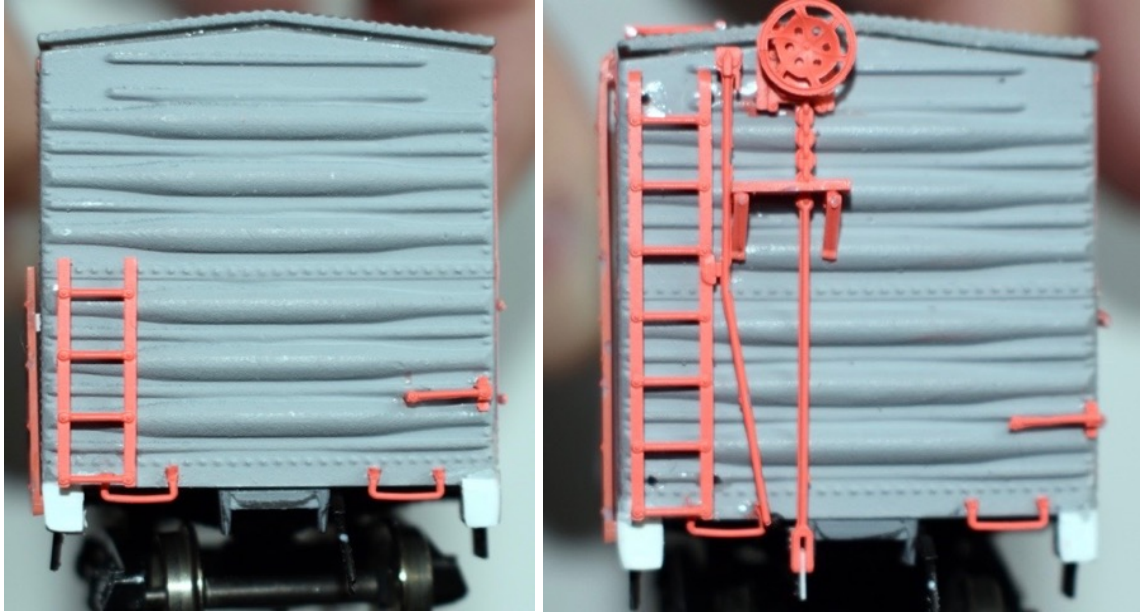
The ice hatch stops in the Intermountain kit are reused as the door stops.



Evergreen 4" x 4" (Item number 8404 to be provided by the modeler) were added to the four corners to allow for A Line straight stirrups to be used but you can also use the kit supplied stirrups.



During the rebuildings the ladders on the A end of the car are cut down to being 5' high. The B end ladders are the length provided in the kit. One can use the kit supplied hand holds, but the 1952 and 1954 cars used straight hand holds on the side of the cars and ends. If you want to modify the hand holds, the holes on the carbody need to be filled with plastic rod or stretched sprue and new 18" wire ones were added and a NBW plastic one added above each. Wire hand holds and NBW casting must be sourced by the modeler.



A and B ends of the model showing the placement of the kit's parts. Placards were added after these photos were taken.



Side of the model showing the taller ladders for access to the brake wheel on the 'B' end. This is a pilot model – the Youngstown door has since been increased in height and the locking mechanism reduced in size and lowered to the next panel. The placards and bad order board are modified from the kit's parts. This illustrates the placement of the door stops from the kit. All of the decals shown here are on the decal sheet with the ACI label and U-1 yellow dot coming from other sheets. The sheet also gives choices of cement and detergent loading and multiple re-weigh locations.

The model shown here was painted with a lightened Tru-Color 188 (MKT boxcar brown) and sprayed with Tamiya Clear to prepare for decaling. The Mask Island decals are extremely thin and you will need to flood the area where they go with water or they may curl under on the

corners. Once you have them in place use a little Microscale Red Decal solvent to get them to conform over the rivets. Do not use Walthers Solvaset as its too strong and will melt the decals. Any silvering can be pricked with a sewing needle and a small amount of the decal solvent added to make the silvering disappear. After the decals were dry a light coat of Dullcote was airbrushed over the model.

Thanks for your purchase of this model; all profits from sales of these kits help offset the costs of our archives and other projects we have planned.