RESIN CAR WORKS
RCW
P.O. BOX 42
BYRON, IL 61010
Freight Cars of Every Description

Kit #11.1
NP 1937 Double Sheathed Boxcar

Introduction

Thank you for your interest in Resin Car Works and this kit. Resin Car Works is not a business in the traditional sense. Its purpose is to share in the fun of prototype railroad freight car modeling and their operations with others by providing unique and different equipment that is not readily available. Several friends assist with various production phases, so it is not quite a one-man operation. To list a few who helped with the production of this kit I would like to thank Tom Madden for the gorgeous castings; Ryan of National Scale Car for the decals; Jerry Hamsmith for the instructions and to Eric Hansmann the keeper of the website and blog.

This is a “CRAFTSMAN” level resin kit and its construction should not be attempted by anyone who has not built similar types of models. The kit consists of a one-piece resin body, floor and detail parts; Tahoe Models double truss side frames; various Tichy parts; and decals. The modeler will have to supply all other parts to create a finished model such as couplers, grabs, stirrups, wire and wheels. See the Resin Car Works website (www.resincarworks.com) for kit extras, including more prototype information and photos.

Warranty

All sales are final. There will be no exchanges or returns. Resin Car Works will replace any part(s) found to be defective due to manufacturing or shipping to the original purchaser within the first 30 days after shipment. The damaged part(s) must be sent back with your request for replacement. As these are limited production kits, do not ask for replacement of parts that you damage or lose after the 30-day period.

Liability

Resin Car works will not be responsible or held liable for any and all personal injury and/or health problems, short and/or long term, which may result from the use and/or misuse of tools, adhesives, materials, castings, paints or any other product(s) used to construct and/or contained in this kit. This kit contains polyurethane castings. Although non-toxic in its cured state, dust is created during filing, sanding and drilling. Your workspace should have air circulation and/or ventilation. Always work in a well-ventilated room. Wear a dust mask or respirator and safety glasses for protection. Always wash your hands when you are finished working.

History

In 1937 the Northern Pacific Railway purchased 520 boxcars of a design similar to that of an A.A.R. 1937 boxcar from Pacific Car and Foundry at Renton, Washington. The cars were numbered in the 9480-9999 series. An excellent history of these cars is available in an article by Patrick C Wider in Railway Prototype Cyclopedia (RP CYC 23), *Mid-Century Composite Box Cars – Late Wood-Sheathed Anachronisms*. Additional information on the cars is available on the Resin Car Works website.

Instructions

General

It's recommended that before you start construction that you familiarize yourself with the additional information and photos on the Resin Car Works website www.resincarworks.com that pertain to this kit. You should also read the entire set of instructions to familiarize yourself with all the steps needed.

- **First, give the resin parts a good cleaning with Dawn and a toothbrush to remove any mold-releasing agents. A light sanding of joints also helps parts to bond.**

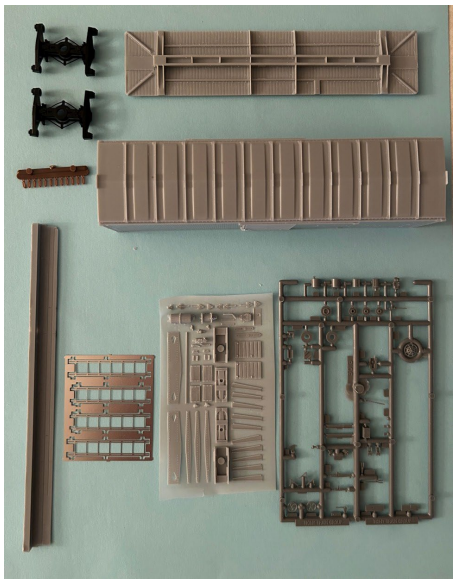
- **The cast parts are best attached with ACC. When the term "cement" is used in these instructions, it refers to ACC. ACC is a strong adhesive which dries quickly. It can easily attach a part where it is not supposed to be. It will glue skin. Be careful. Place a few drops on a plate of glass and use a wire or pin to transfer small amounts of ACC to the area to be joined. Always wear safety glasses. ACC debonder is a useful tool for removing smudges of ACC from surfaces where it should not be. Place a drop on the offending spot and wipe up.**

- **GOO or other such products are not recommended for construction except in small quantities, as it will soften the casting material.**

- **When a measurement is given, it is in prototype feet and inches.**

- **When the word "scrap" is used, it is referring to an item that the modeler is to supply.**

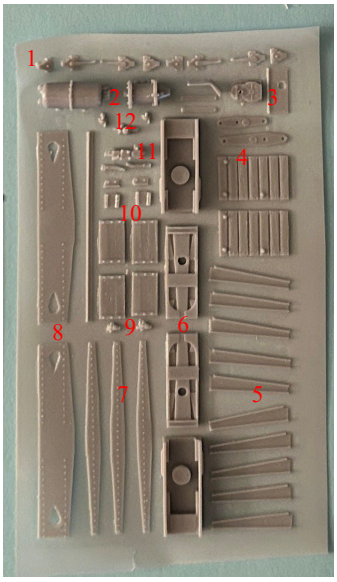
Kit Contents



The Resin Car Works kit provides the basis for creating a model of the NP prototype car. Besides the decals included in the kit, the various parts provided are shown in the photo. They include (counterclockwise from upper left):

Tahoe truck frames
Tichy turnbuckles
Wooden running board
Plano etched side and end ladders
Sheet of resin detail parts
Tichy AB brake set
One piece body
Floor/underframe

The modeler will need to provide wheel sets, couplers, brass wire for the plumbing and rods, grab iron material, sill steps, air hoses and brackets, coupler lift bars, and other bits of brass and styrene.



Items on the resin parts sheet include:

1 – Door mechanism details
2 – Brake reservoir and cylinder
3 – Power brake housing and brake step
4 – Brake levers and lateral running boards
5 – Cross ties (8 needed)
6 – Coupler boxes and lids
7 – Cross bearer caps (2 needed)
8 – Bolster caps
9 – Retainer valve (1 needed)
10 – Tack boards
11 – Control valve
12 – Dirt collector

Construction

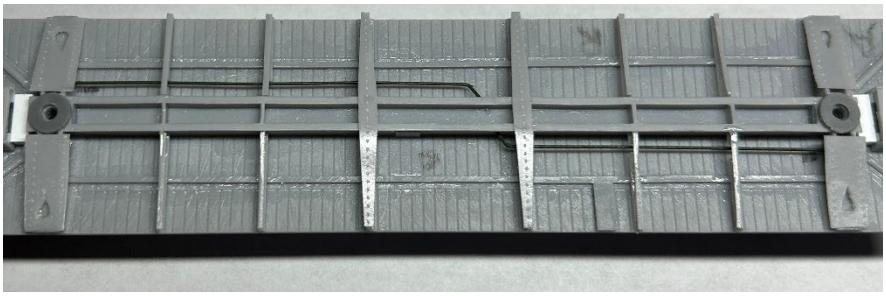
Underframe

Add approximately 3 oz. of weight to the floor. Use whatever is your favorite type of items from the scrap box. Steel washers or nuts, flat lead strips, or tire weights are possible choices.

Clean up the provided coupler pockets and narrow the lids as necessary to fit. Place (do not glue) the coupler pockets on the floor resting against to bolster and check the end to end distance. The distance between the coupler striking plates for the prototype is 41' 11 ½". *(If you decide to use a different coupler box, measure it instead).* Check that distance on the model and, if it is too short, add scrap styrene at each bolster end to increase the distance. (An approximate 0.070" at each edge was used on the instruction build.) Then attach the pockets to the underframe and drill and tap holes for 2-56 screws for the trucks and 1-72 screws for the couplers. The kit supplied coupler boxes will accept only Kadee No. 158 semi-scale Whisker couplers.

Refer to the photo below and determine the location of the cross-ties and brake components. Fit and cement the bolster covers and the major crossbearer cover plates. Note that the bolster covers do not extend to cover the center sill. Trim them as necessary. With the Tahoe trucks provided in the kit, the couplers will sit too low – attach the washers provided on the Tichy sprue over the bolster holes you have drilled.

Fit and cement 8 minor cross-ties to the center sill. They are placed with the notch under the center sill flange with the channels facing outwards towards each end of the car. If adding the train line to the car (0.019" wire was used in the photo), do so while placing the cross-ties to make the drilling of the holes easier. Test fit the floor to the body and modify as necessary for a good fit.



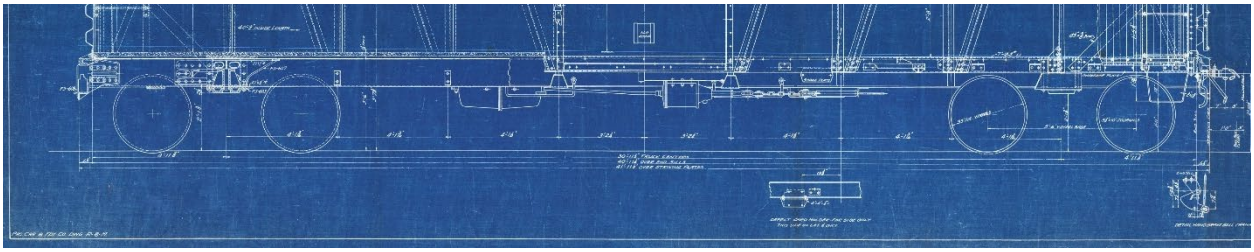
A end of car.

Photo shows the train line, cross-ties, bearer and bolster caps, and washers over the bolster holes.

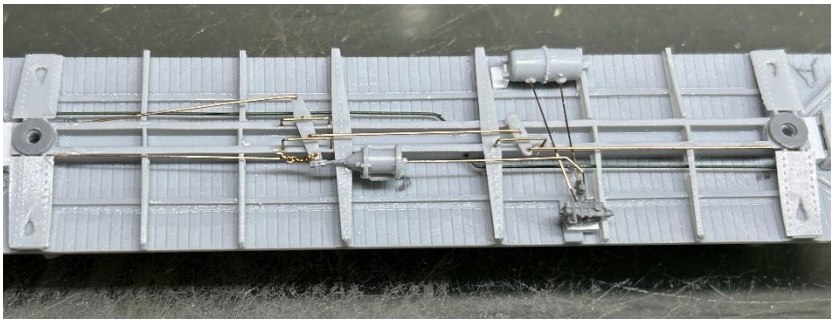
Moving on to the brake components, there are two sets provided. You can use the cast resin items or those on the Tichy sprue. First, detach the parts and then drill out all the holes needed for piping. *(If you decide to use a different group of brake components, prepare them instead)*. The triple valve goes on the pad cast onto the underframe floor. The reservoir goes directly opposite across the center sill. Cement one end of the reservoir to the center crossbearer and the other end to a short piece of scrap styrene, making sure that the reservoir is level. Cement the brake cylinder bracket onto the center sill – following the brake arrangement drawing for these

cars, this should be at the approximate center of the car, very slightly toward the B end. (See drawing below). Create the brake cylinder from the parts provided. Care should taken in the alignment to be sure the lever is parallel to the floor. Also be sure to drill out the hole for the cylinder to triple valve pipe on the rear of the cylinder. Once complete, cement it to the bracket. Now install all the connecting piping using 0.010" wire. The dirt collector (Tichy sprue or resin part) can also be added to the control valve if desired.

Install the brake levers and the brake rods with 0.0125" wire, and if desired, use the Tichy turnbuckles with one end removed as clevises. Also install the connecting rod from the brake cylinder to the bolster with a small piece of scrap chain at the brake cylinder. Add the 3 lever guards with 18" grab iron material. (See photo below.) This completes the underframe.



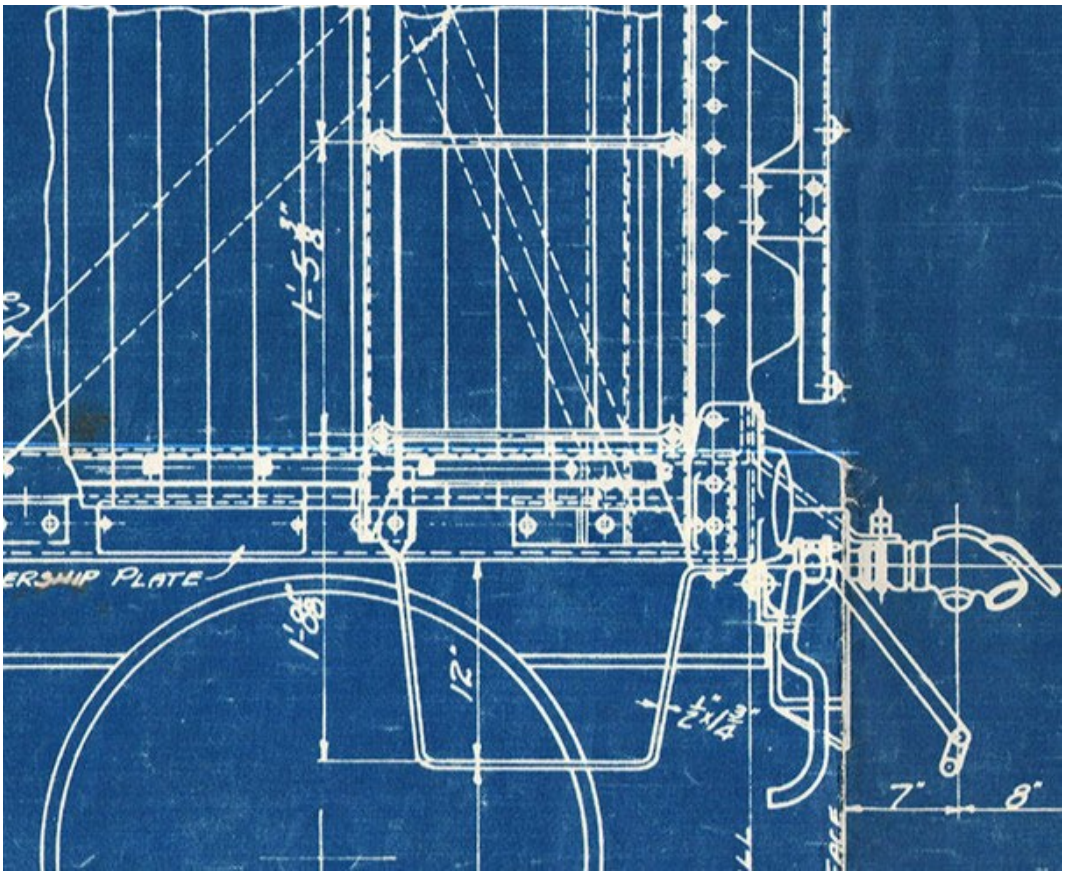
Excerpt from the General Arrangement drawing showing the placement of the brake components.



Body

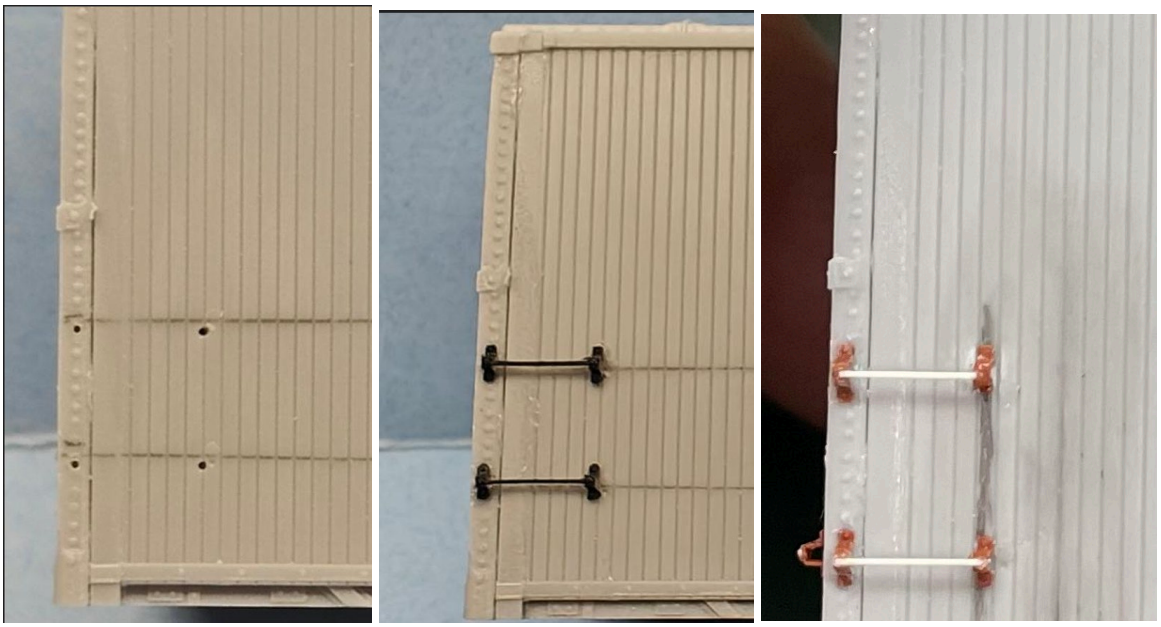
As this is a one-piece body kit, most of the hard work has been done in creating the basic car shell. Clean the resin parts of any flash and drill the holes for the various parts. Use a #78 or #79 drill for all the grabs and #76 for the sill steps. You can insert the floor into the body at this time or wait until painting.

The drawing excerpt below shows the shape of the prototype sill steps.

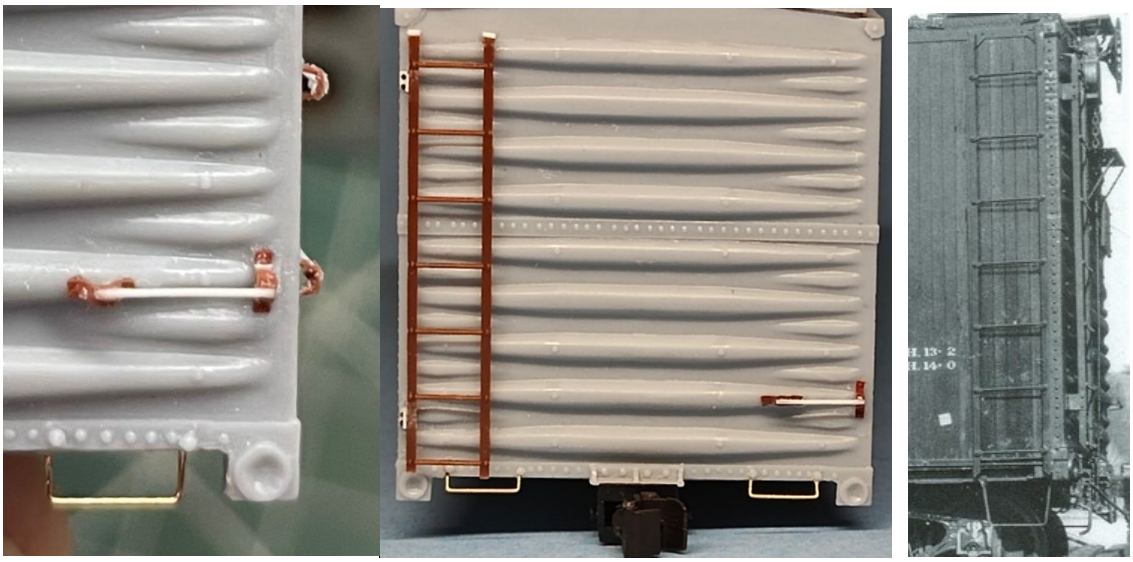


The ladder is 18” wide and thus so is the step at it’s attachment points. The depth is shown as 12” below the side sill. The material used to create the step is shown as ½” x 1 ¾”. An A-Line type A stirrup could be used and slightly reshaped to represent the sill step. Or, brass bar of .005” x .018” could be used. Although slightly too thick, Detail Associates does make .010” x .018” brass bar (DA #2522). Add the lower end grabs irons on both the “A” and “B” ends of the car using commercial grabs or 0.010” wire. (See photos following).

The prototype had 22” bracket grabs on the side and upper ends. At one time Detail Associates marketed a 23” bracket grab (DA #6209), and these might be available on the secondary market. Brackets can also be removed from currently available grabs and used as the end points. Attach the brackets to the car side. (See photos below for placement of the brackets on the car sides and ends. Examples are shown for the DA grabs and created ones.) Various ways of creating the rung exist. One alternative could be to cut a small piece of 0.010” brass or plastic rod and glue it across the space between the brackets. Another would be to use an Overland brass part that was imported a number of years ago that included just the brackets.



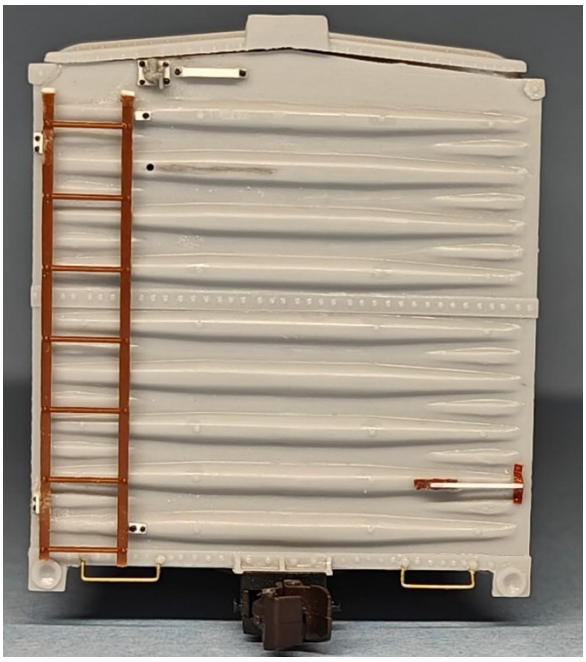
The end upper grab construction is similar. However, the inside bracket is arranged horizontally.

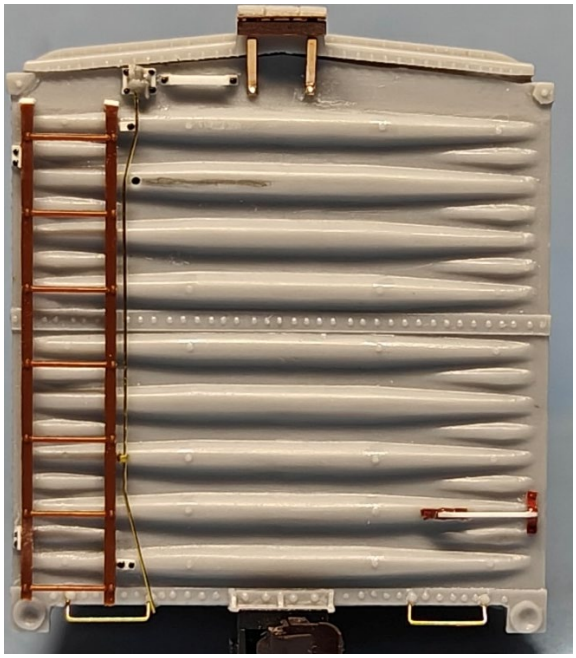


There are no known commercially available ladders matching the prototype for this car. The ladders supplied with the kit are close to the prototype but are too long as the rung spacing is larger than the 1’ 5 3/8” of the prototype. The difference in total is about 8”, which causes the ladders to be noticeably closer to the roof of the car. Ladder substitutes can be used – Detail Associates or IMWX are two possibilities. They are also not perfect, but do come closer to the prototype. Shown above is an IMWX (Intermountain) one and the prototype ladder from NP 9747. In any case, add the ladders to the car sides and ends at this time.

On the “B” end of the body casting, determine if you will be using the resin parts or the Tichy parts provided. Referring to the prototype photos, attach the retainer valve and line first and then install the chosen brake housing, chain and bell crank on the end. Run 0.008” wire from the

retainer valve to the bottom of the end. Run 0.0125” wire from the bottom of the chain to the bell crank. See the photos below.

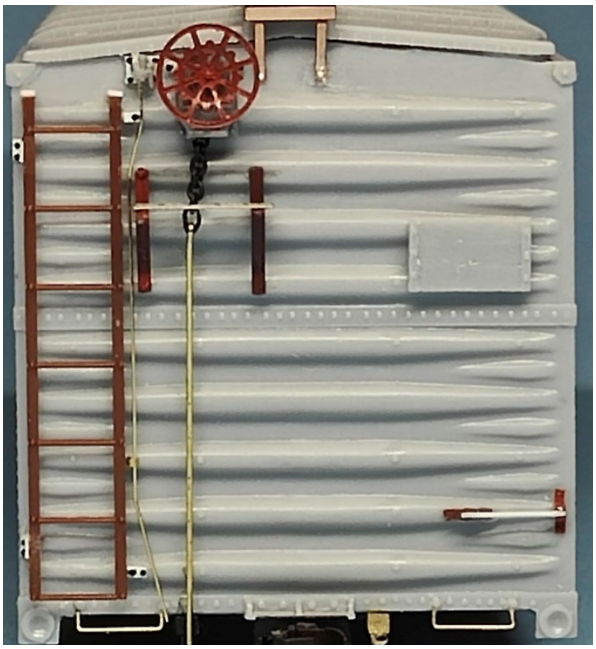




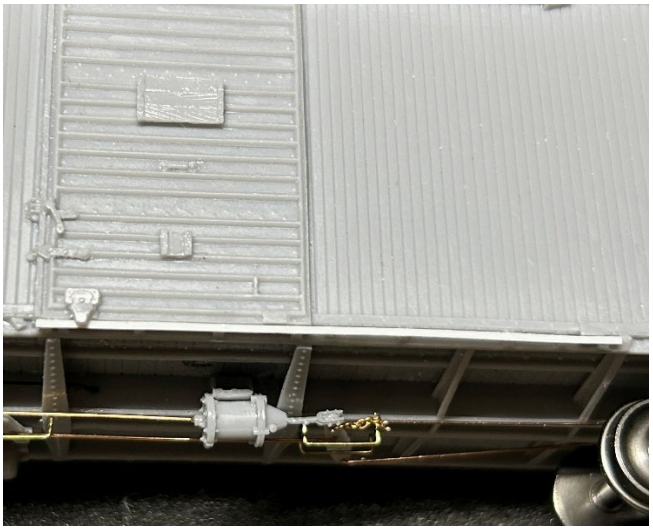
The retainer valve on the prototype rested on a pad and a scrap piece of styrene was used to represent that. Also, in order for the brake housing to rest flat on the car end, a brace was created. The photos show the addition of the kit provided wooden running board and a Yarmouth end support. These can be added now or following the completion of the B end details, but note the space constraints caused by the addition of the brake wheel.

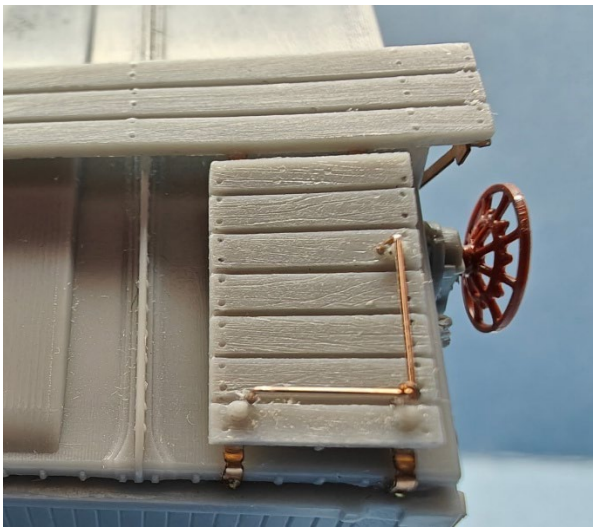
The brake housing used here is from the Tichy sprue, the chain is from A-line, the brake wheel shown is a Kadee Ajax type (#2030). The brake step supports are from Intermountain and the bell crank is from the CalScale AB brake set (#190-283).

Add the kit tack boards to the car sides and ends following prototype photos. Although these were placed high on the car as built, many cars had these lowered fairly quickly. The door hardware and lower door guides can also be added to the car now. See photos below of both a prototype car and a partial model of the handle, rollers and guide.



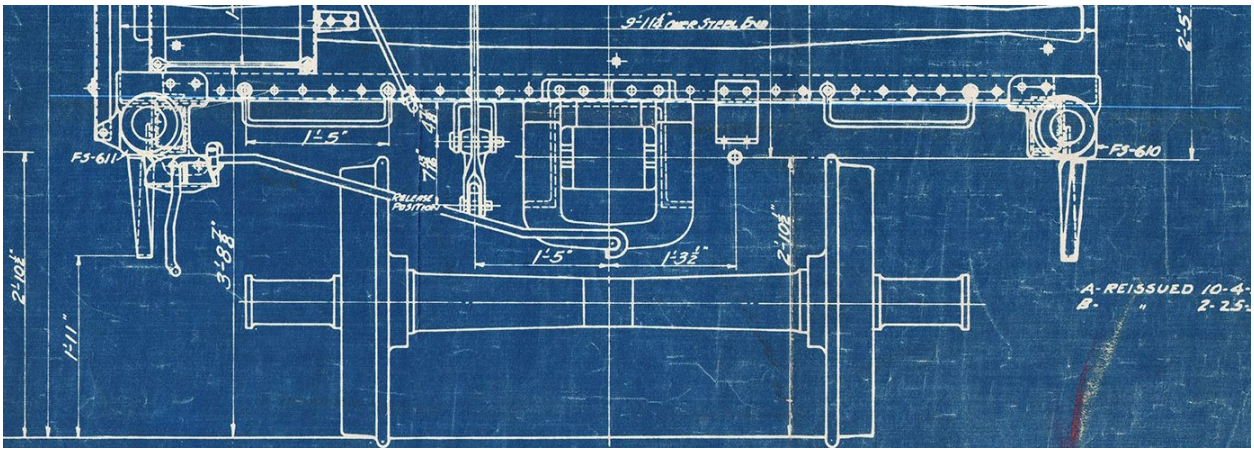
Strip styrene (2” x 2”) can be used to simulate the lower door track – on the model shown a piece 13’ 9” long was glued from the left door edge to just beyond the lower door stop. The various nubs at the bottom of the side sill within that distance were lightly sanded to provide for an even surface. One of the kit provided door rollers is shown attached to the raised rectangle cast onto the door. The resin kit handle is yet to be added.





The laterals provided in the kit should be added to the roof next by first removing any flash from the parts and then drilling holes for the corner grab irons. Either commercial grabs or 0.010" wire can be used. Supports for the laterals can be shaped from brass strips - 0.010" x 0.018" shown in the photo.

The cars had bottom operated cut levers. The partial B end drawing below shows the cut lever bracket attached below the pole pocket. It also shows the location of the air hose bracket. Cut lever brackets can be a commercial part (one choice would be Yarmouth #507) or scratchbuilt. Form cut levers from 0.0125" wire, using the prototype drawing to determine the shape, and attach to car. The air hose bracket on the model shown is from Yarmouth (#506) and the air hose is Moloco #0307. You could use these or substitute with your normal parts.



Painting and Lettering

When new, these composite box cars were painted Freight Car Brown on the sides and ends with black roofs, underframes, and trucks. Car stenciling was white with a white, red, and black NP 36" monad monograms. Repainted cars often would have the trucks and roof the same color as the body. Before painting, wash the car again with Dawn, rinse and let dry.

As for the color and types of paint, that's an individual choice. The finished models below were painted with Vallejo German Red Brown (#RAL 8012).

Once the initial coat of paint is dry, add a gloss finish and then decal with the accompanying set, referencing prototype photos. The Mainstreet slogan was added in late 1951. The monad grew to 60" in the early 1950s. The word RAILWAY was added to the monad beginning in 1957. Once the decals have set, seal the car with a flat glaze. Weather to taste.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