

**RESIN CAR WORKS**  
**RCW**  
**P.O. BOX 42**  
**BYRON, IL 61010**

*Freight Cars of Every Description*

**Instructions**  
**Kit #8.05**  
**Missouri Pacific**  
**1942 ACF Boxcars**



*ACF Photo, Ed Hawkins Collection*

## 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; Dave Campbell for the decal artwork; Ed Hawkins for the prototype information; Jerry Hamsmith for building the pilot model and drafting the instructions; and to Eric Hansmann the keeper of the website and blog.

This is a "CRAFTSMAN" level resin mini-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 truck sideframes; Plano Model Products etched Apex running board; various Tichy parts; various piece of wire and stirrups; and decals. The modeler will have to supply all other parts to create a finish model such as couplers and wheels. See the Resin Car Works website ([www.resincarworks.com](http://www.resincarworks.com)) for kit instructions, 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

(see MP 1942 ACF Boxcar History)

## Construction

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](http://www.resincarworks.com) that pertain to this kit.

- **First give the resin parts a good cleaning with Dawn dish detergent 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 shouldn’t 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’s in prototype feet and inches.**
- **When the word “scrap” is used it is referring to an item that the modeler is to supply.**
- **Read the instructions thoroughly before starting the build.**

## **Underframe**

Add approximately 3 oz. of weight to the floor. Use whatever is your favorite type of items from the scrap box. In this case eight steel washers did the trick. In order to enhance any glues used to hold the weight, and to significantly reduce the possibility of the weight coming loose, you can make a bracket using scrap styrene, which is then attached directly to the floor over the weight.

Clean up the provided coupler pockets and narrow the lids as necessary to fit. 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. These coupler boxes will accept only Kadee No. 158 semi-scale Whisker couplers. *(If you decide to use a different coupler box, attach it now).*

Refer to the photos and to 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. These parts line up with the inserts within 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, do so while placing the cross-ties to make the drilling of the holes easier.

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. 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 A end. Create the brake cylinder from the parts provided. Care should be taken to align the front and rear lever holders and to be sure each set 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. Cement one end of the reservoir to the center crossbearer and the other end to a short piece of scrap styrene as shown, making sure that the reservoir is level. Now install all the connecting piping using the 0.010” wire provided with the kit.

Install brake levers and brake rods with 0.0125” wire using 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. This completes the underframe.

## **Body**

As this is a one-piece body kit, most of the hard work has been done in creating the basic car shell. As I like to get the nasty tasks done first, clean the resin parts of any flash and drill the holes for the various parts. I generally use a #78 drill for all the grabs and #76 for the stirrups.

Attach tack boards and route cards to the doors and ends. Tichy ladders have been provided, but an extra rung will need to be added for these cars. Trim the top of one ladder just above the bolts of the rung. Trim the bottom of another ladder

just above the rung itself. Dress the edges of ladder pieces with a file to maintain spacing. Working on a plate of glass, cement the two sections together. There are small tabs on the underside of the Tichy ladder that need to be removed. Dress the ladders with a file, cut to fit, and attach them to the car. Refer to the prototype photos for the location of the grabs and stirrups and install. The A-line stirrups provided in the kit will need to be re-bent to appear as the prototype.

The side bracket grab irons have had their outer brackets cast onto the body of the car. Alternative ways of creating the rung exist. You can drill into the center of the cast on pieces and insert a supplied straight grab flush into the holes. You could also cut a small piece of .010" brass or plastic rod and glue it across the space between the cast on parts.

Note that there is an "A" and "B" end to the body casting. On the "B" end, determine if you will be using the resin parts or the Tichy parts provided, then install the resin brake housing straps. Referring to the prototype photos, attach the retainer valve first and then install the chosen brake housing, plastic chain and bell crank on the end. Run 0.010" 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. The brake step support is part of the etched fret for the running board. Bend and attach to the car end. Attach etched eyebolts to the cast on cut lever brackets. Leave the cut levers, brake wheel and running board off the car for now to make painting easier.

This completes the body details.

## **Painting and Lettering**

When built, the cars were painted overall a red/brown color with black underframes and trucks. Repainted cars would have the trucks 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. In this case I used Scalecoat I Boxcar Red #2 for the basic body. Another paint possibility would be Tru-Color MP Freight Car Red.

Once the initial coat of paint is dry, add a gloss finish and then decal with the accompanying set, referencing prototype photos. Paint the wood portion of the tackboards black for newer cars or leave them the body color for cars that have been repainted. Seal the car with a flat glaze.

## **Final Detailing**

If you have not already done so, attach the underframe to the body, making sure that you are matching it to the "B" end. Install trucks, adjusting the coupler height with the Tichy washers provided on that sprue. Form cut levers from 0.0125" wire, using the prototype photos to determine the shape, and attach to car.

Cement the Plano etched running board to the roof, ensuring that it is centered on the car. Included are the longitudinal board, two lateral boards and the supports for the laterals. There are many methods to attached etched running boards to roofs. My method is to initially attach the longitudinal etched part to the roof with Pliobond and then go back and place small dabs of ACC at the running board supports. I have models that are 20 years plus in age where the metal running board is still attached at all the supports. Form 0.0125" wire for the corner grabs and, with the etched eyebolts, cement to the latitudinal running boards. Add the supports to them and cement to the car. Cement provided end running board supports between the longitudinal board and the car ends. Attach the Ajax brake wheel to the brake housing. If using them, install the air hoses and brackets. Brush paint these final details to match the car color. Weather as desired and your model is ready for the layout.