

RESIN CAR WORKS
RCW

**P.O. BOX 42
BYRON, IL 61010**

Freight Cars of Every Description

**Kits 10.01 (Map) and
10.02 (Ship and Travel)
SFRD Rr-35/36/39/40
Rebuilt USRA Reefers**

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 to provide unique and different equipment that isn't readily available. Several friends assisted with various production phases so it's not quite a one-man operation. To list a few who helped with the production of this kit I would like to thank: Charlie Slater for the use of his patterns; Tom Madden for the castings; Ken Soroos for the decal artwork and his help with formatting the instructions; and Eric Hansmann, the keeper of the website and blog.

This is a "CRAFTMANS" level resin kit and its construction should not be attempted by anyone who has not built similar types of models or who doesn't have a knowledge of prototype freight car construction and components. The kit consists of a one-piece resin body, floor and detail parts; Plano Models etched running board; Yarmouth Model Works etched stirrups and hatch supports; Tichy AB brake set; assorted wire sizes and grabs; decals to letter the car in either the "Map" (Kit 10.01) or "Ship and Travel" (Kit 10.02) paint scheme; and Tahoe Models Andrews truck side frames. The modeler is to supply any small styrene bits, couplers, weight, wheels



All Model and Construction Photos by Frank Hodina

and small screws needed to complete the model.

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, don't 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, that 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 their cured state, dust is created during filing, sanding and drilling. Air circulation and/or ventilation should be provided. Always work in a well-ventilated room. Wear a dust mask or respirator and safety glasses for protection. Always wash your hands when you're finished working.

History

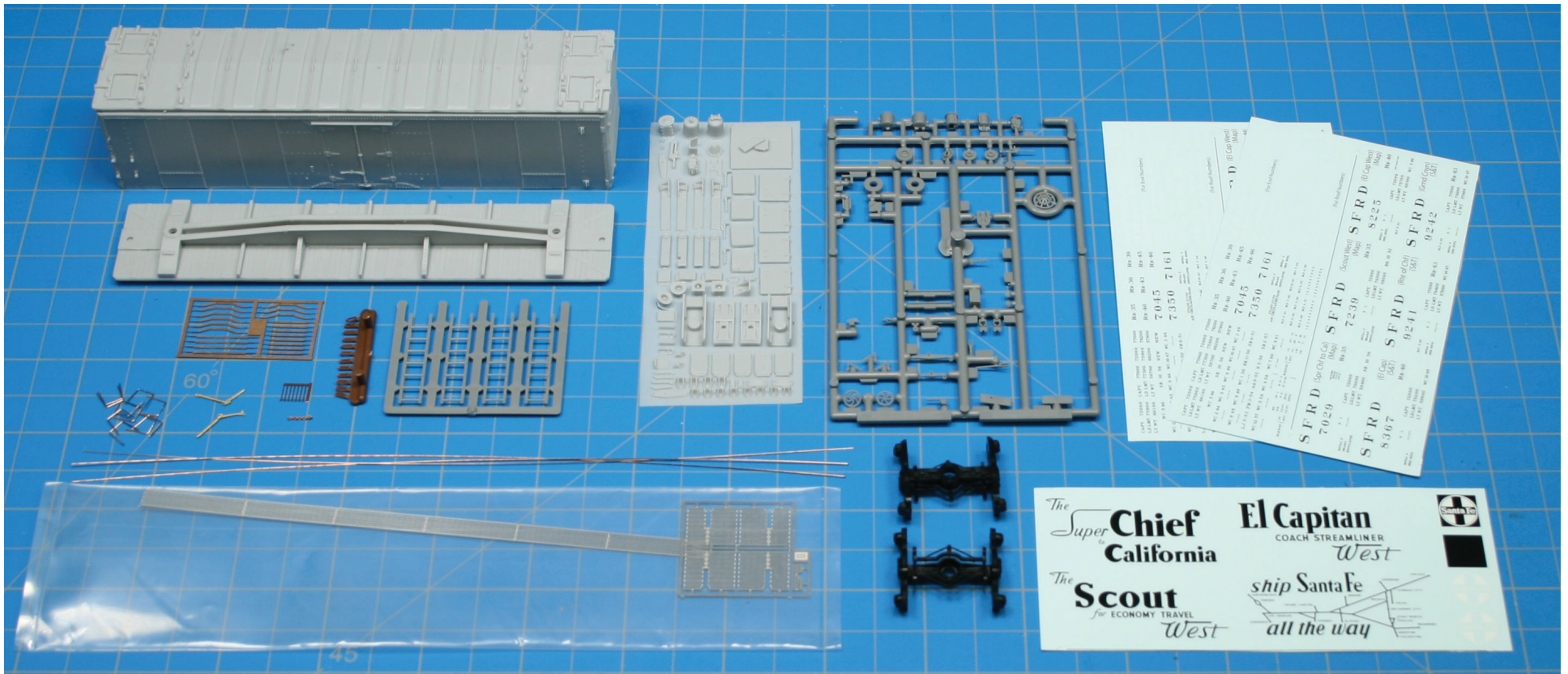
An excellent and complete history of these cars along with all SFRD reefers is available in **Santa Fe Railway Rolling Stock Reference Series Vol. 2 Refrigerator Cars Ice Bunker Car 1884-1979** by Keith Jorden, Richard Hendrickson, John B. Moore and A. Dean Hale, from the Santa Fe Railway Historical and Modeling Society Company Store, for \$45 each. For a general history, please reference Sunshine Models' *Prototype Data Sheet (PDS)* #74A, *SFRD Postwar Reefer Rebuilds*, a copy of which can be found on the extras page for this kit on the Resin Car Works web site.

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 that pertain to this kit. Especially helpful are a series of prototype drawings that show the placement of the various car parts.

- 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



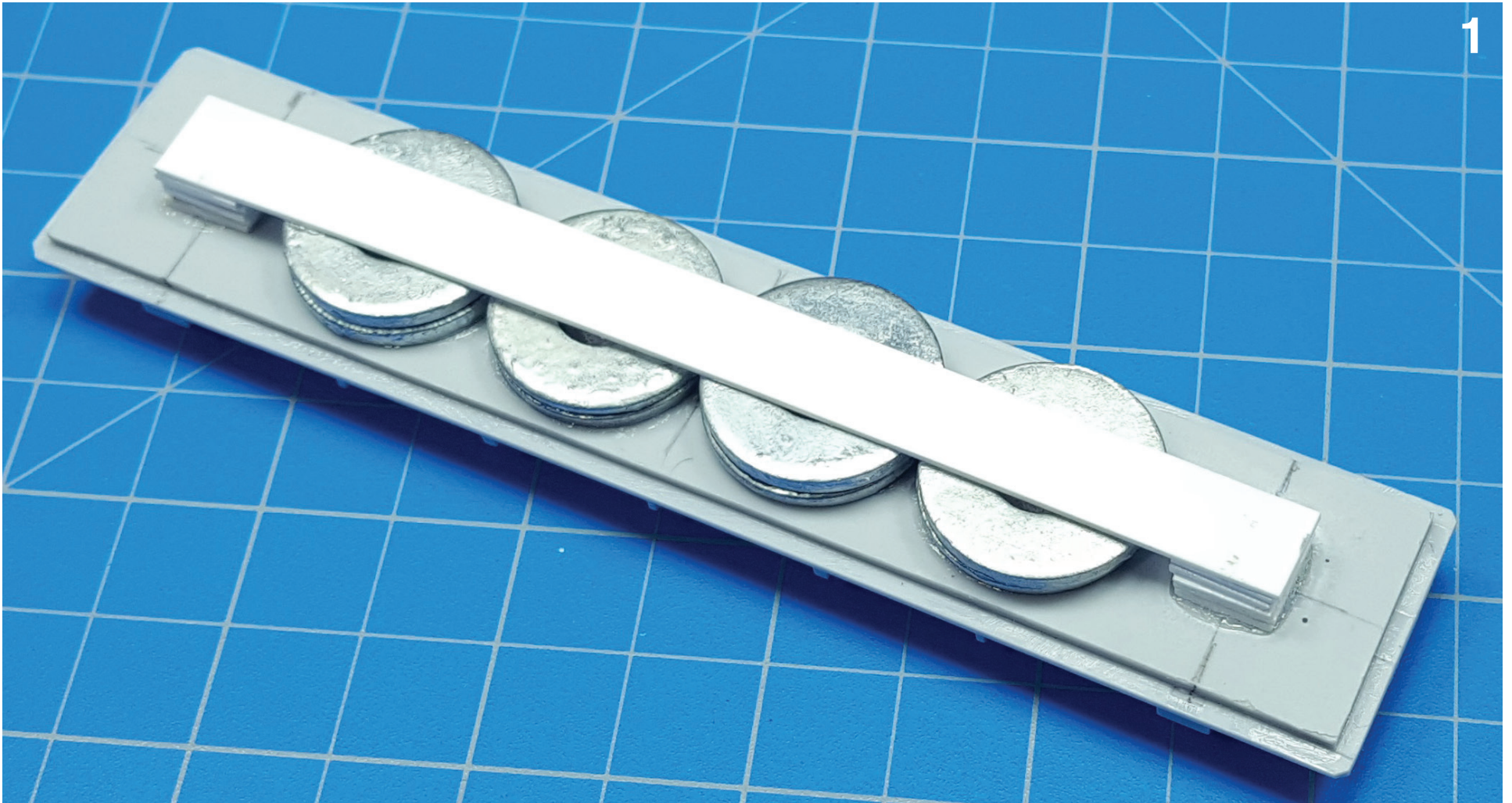
of ACC from surfaces where it shouldn't be. Place a drop on the offending spot and wipe up.

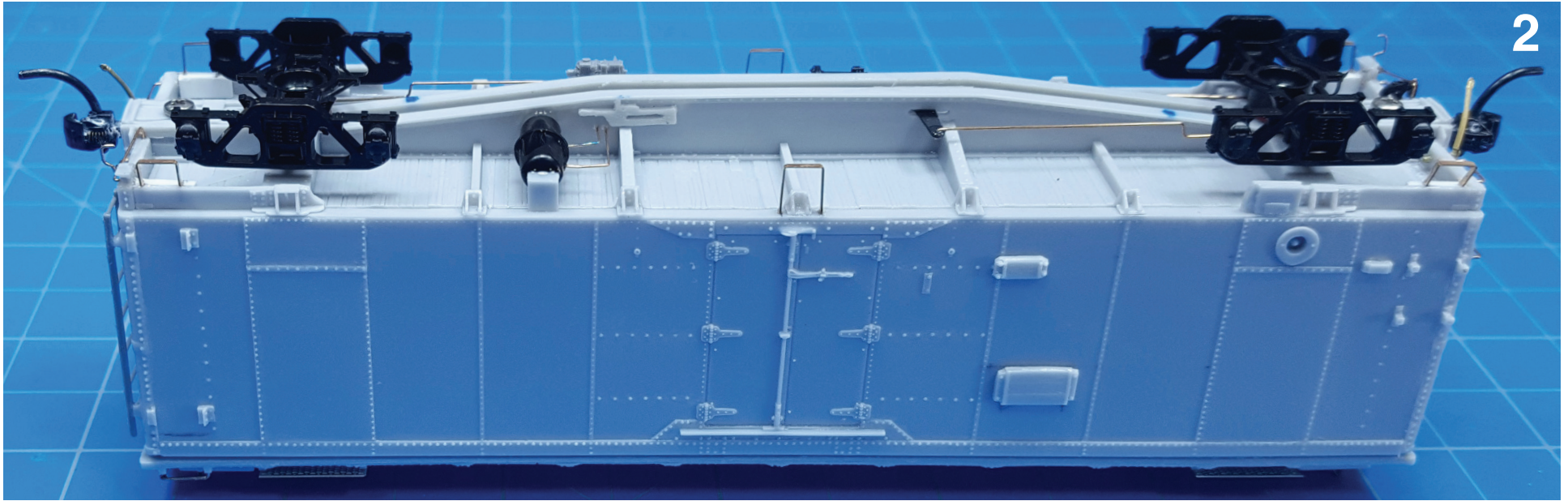
- GOO or other such products are not recommended for construction except in small quantities, as it will soften the casting material.
- When a measurement is given, it's in prototype feet and inches.
- When the word "scrap" is used, it refers to an item that the modeler is to supply.

1. Basic Construction

As this is a one piece body kit, most of the hard work has been done in creating the basic car shell.

Add approximately 2 oz. of weight to the floor. I use cheap washers from one of the big box stores that you can get for about \$3 for a bag of 100. Eight 7/8" O.D. washers are about right. And since I don't trust any glues holding the weight, I make a bracket using scrap styrene, which is attached directly to the floor over the weight. When dry, drill and tap the bolsters





for number 2-56 screws.

Drill a 1/8" hole in the car side and install the Preco fans. Rr-35 and 39 used the Preco G-12 fan with the square face plate. Rr-36 and 40 used the Preco G-15 or G-26 fans with the round plate. Some early cars were built without fans and had a cover plate over the fan holes, where fans were later added.

Cement the floor into the car body. The "B" end of the floor is where the brake lever slot goes through both sides of the center sill.

Cement a scrap piece of 2" x 12" styrene, cut the width of the coupler box, on the bottom of the end next to the coupler pad. Cement the coupler boxes in place.

Cement the end sill segments on either side of the coupler boxes. Note that the grabs are at the bottom of the ends sills. The end sill with the notch goes on the left side of the "B" end.

Cement the corner side sills to the end sills and car body, trimming the side sills so that the bolster casting is centered on the bolster. Cement four large side gussets to the ends of the large cross bearers and six small gussets to the ends of the small cross ties.

Reinforce the back side of the corner sills with scrap 0.040" x 0.100" styrene for future stirrup installation.

Finish up the coupler boxes/ends sills by cementing the coupler gussets

on either side of the coupler box. This completes the "Basic Construction".

2. Detailing

Refer to the photos to determine the location of brake components.

Assemble and pre-drill the AB brake cylinder, reservoir and triple valve (#78) for air lines. Clear the slots in the center sill for the brake levers.

Cement the brake cylinder on the pad next to the double slots in the center sill. Cement the control valve platform to the floor. Add the reservoir mounting bracket to the side of the reservoir with one attachment point. Cement a scrap piece of 0.040" x 0.080" styrene to the side of the reservoir with two attachment points. Cement the control valve and reservoir to the underframe. Cement the Royal F slack adjuster on the center sill opposite the small brake lever. Run two 0.010" wires between the reservoir and control valve and also a wire from the control valve to the cylinder.

Install brake levers with 0.0125" wire using the Tichy turnbuckles with one end removed to form the clevises. Also install the connecting rod from the brake cylinder to the bolster with a small piece of chain at the brake cylinder.

Cement the fan drive housings to the bottom of the left car side next to the car bolster.



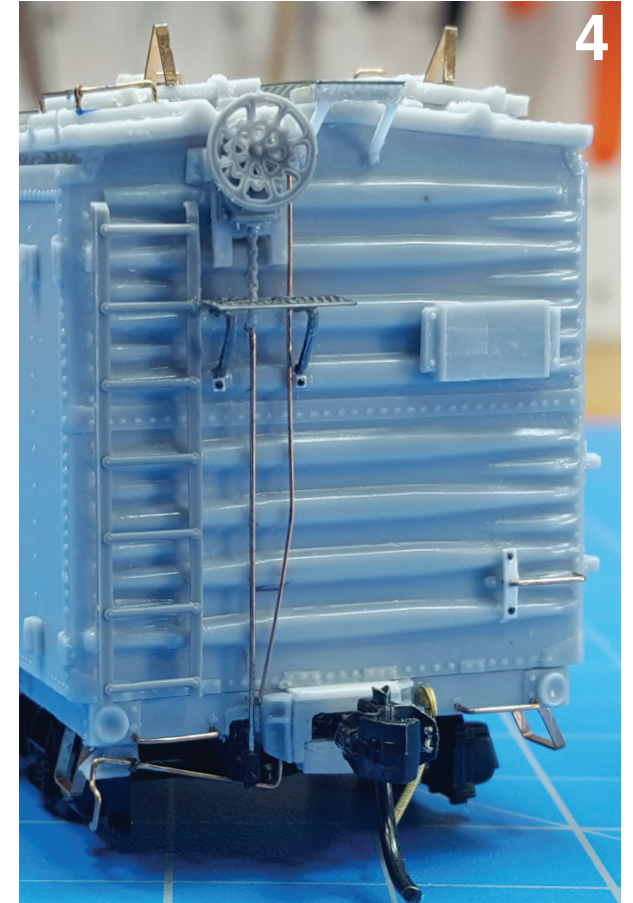
Cement the four tack boards and two routing card boards to the car sides and ends. The route card goes on the left side of the “B” end of the car.

Drill all grab iron and door handle holes (#78). Cement two grabs on the lower edges of the end sills below the rivet heads. The left end of the right side end grab is supported by a mounting bracket. Drill a hole through a scrap piece of 0.010” x 0.030” styrene, leaving about a scale foot of material on either side of the hole. Slip the bracket on the grab and then cement the grab and bracket to the end. Trim the bracket when dry to match the prototype photos.

Cement the ladders to the ends.

Leave the grabs, door handles and ladders off the sides until after painting to make the car easier to mask.

On the “B” end, cement the brake housing mounting bracket to the top two ribs next to the ladder. Cement the brake housing, plastic chain and bell crank. The bell crank goes in the slot on the end sill. Run 0.0125” wire from the end of the chain to the bell crank. Cement a small piece of scrap 0.030” x 0.040” styrene next to the brake housing mounting bracket. Cement the retainer valve to this bracket. Run a retainer valve line of 0.010” wire between the retainer and end sill.



Finish the “B” end by installing the hand brake step support made with scrap staples. Drill holes (#76) through the end to attach the supports. Cement the etched platform to the staples.

Place small amounts of Pliobond on the roof supports. Place the running board on the roof supports, equidistant between ends. Touch the roof supports with small amounts of ACC when the Pliobond is dry to set the running board. Cement the hatch platforms on the roof supports.

Cement four roof hatches, opened or closed. Create hatch handles with 0.0125” wire and attached. Form corner grabs with 0.0125” wire and ce-

ment in place using an etched eyebolt for the center support.

For the end running board supports, create angles and diagonal supports from scrap 1 x 3 styrene. The supports go from the angle to just above the nut and bolt castings on the ends.

Cement the cut lever brackets to the left corners of the ends. Attach etched eyebolts to the cut lever bracket. Form the cut levers from 0.0125” wire, using the prototype photos to determine the shape, and attach to the car.

Attach the brake wheel to the brake housing.

Drill holes and tap 1-72 for screws for the couplers. The coupler boxes will accept only Kadee No. 158 semi-scale Whisker couplers.

Drill holes, bend the etched stirrups, and attach as per the prototype photos.

Cement the etched hatch rests to the top of the hatches.

Drill and cement air hoses in each end sill to the right of the coupler. This completes body detail and construction.

3. Painting and Lettering

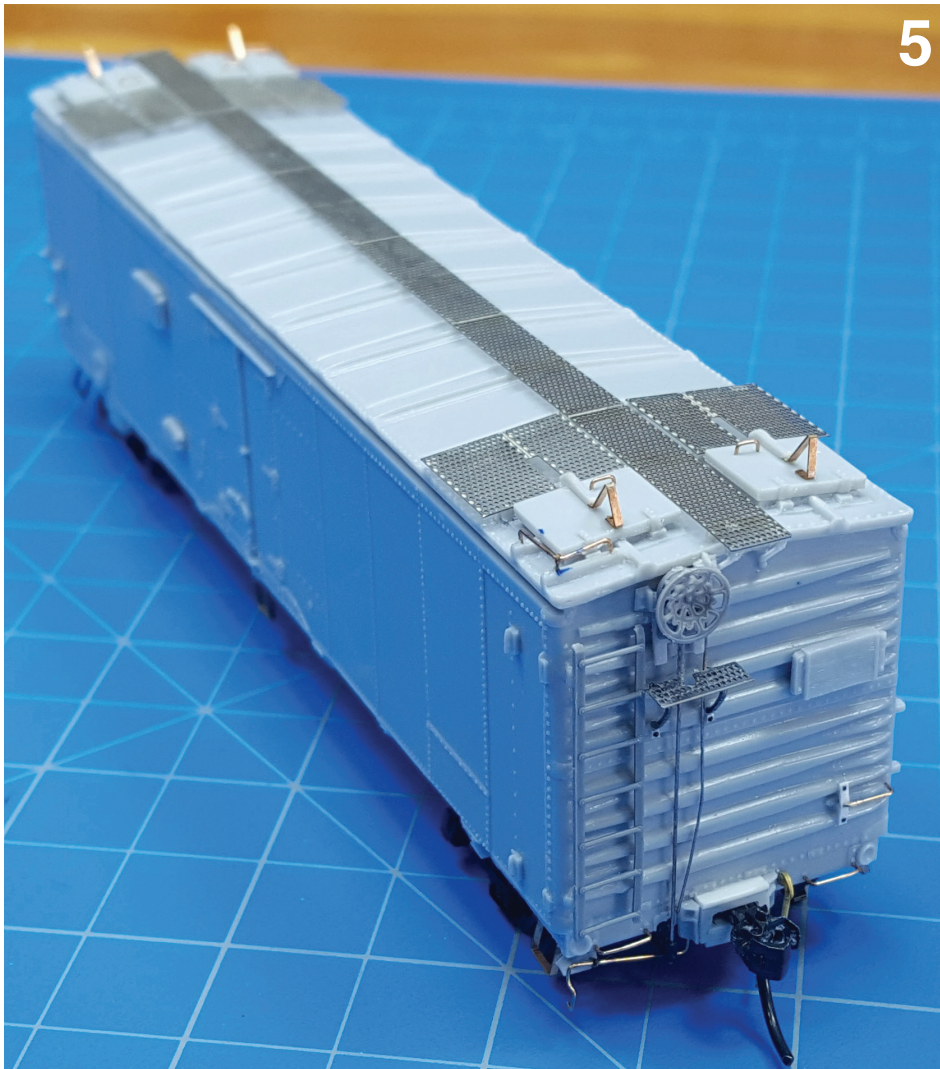
Before painting, wash the car again with Dawn, rinse, and let dry.

As for the color and types of paint, that’s an individual choice. I use Scalecoat and Testor’s Model Master Enamel Paints. From the **Santa Fe Painting and Lettering Guide**, the Scalecoat mix for the yellow-orange is 4 parts #16, reefer orange and 1 part #15, reefer yellow. I found that it is easier to paint the yellow-orange first and then mask for the black. Before painting the black, seal the masking tape edges with either the yellow-orange or a clear glaze. The flat glaze is also Scalecoat.

Regarding the decals, in the dimensional data area, there is a “cut line” printed in the middle on the backing (without decal film over it). The spacing at this point varied from car to car, so refer to photos and trial placement on the model to determine the best spacing for your selected car.

4. A Note on Trucks

These cars rode on a variety of trucks, with some of the more common being ARA, ASF A-3a “Ride Control” and recycled Andrews. Tahoe Models #012 USRA 50-ton Andrews sideframes are provided in the kit.





Santa Fe Railway Photo