

RESIN CAR WORKS
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Freight Cars of Every Description

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UTLX Class X-3 6500 Gallon Tank Car 1937 Underframe (Kit 4.03) 1917 Underframe (Kit 4.04)



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 assist 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: Steve Hile for his research, data, plans, detail drawings and car history; Tom Madden for the gorgeous castings; Dave Campbell for the decal artwork; Ken Soroos for his help with formatting the instructions; and to Eric Hansmann the keeper of the website and blog.

This is a remake of a kit issued by Sunshine Models from my patterns from 15 years or so ago. The patterns were redone to make the kit easier to construct while correcting a few detail errors that were found in the original kit. Those 15 plus years were put to good use learning about UTLX equipment and the company's operations.

This is a "CRAFTMANS" 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 resin tank body, underframe and detail parts; photoetched eye bolts; brass stanchions; plastic AB brake set stirrups; assorted wire sizes and grabs; decals and appropriate Tahoe Models trucks. The modeler is to supply everything else like small styrene bits, chain, couplers, weight 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 its cured state, dust is created during filing, sanding and drilling. Air circulation and/or ventilation should be provided. Always work in a well 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

See UTLX 6500 Gallon Class X-3 Tank Cars by Steve Hile

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 is the general arrangement drawing as it shows the placement with dimensions 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 is referring to an item that the modeler is to supply.**

Underframe

The underframe has been partially detailed to speed up the model construction. Note that there is a “B” or brake end to the part. Consult the drawings and photos on the website to help with the location of various underframe details.

Photo 1:

Remove casting sprue and vent ports at corner of frame.

Photo 2:

Drill and tap the bolster and coupler pockets for 2-56 screws. Find the center line of the mark frame and mark. Mark the location of the running board supports which are 3'-6" to the “B” end and 2'-6" to the “A” end.

Photo 3:

As I'm lazy and hate cleaning resin parts scale 2"x12" styrene was substituted for the running boards after being distressed. Fit the long running boards between the bolsters and cement in place. A stronger joint can be created by using small piece of scrape etched brass tying the bolster and running board together. Install the running board supports as per the photo. The angle point into the center of the frame. For the brake cylinder supports attach the one closets to the center line first. Attach the brake cylinder to this support. It fits flush against the support. Attach the remaining brake cylinder support.

Photo 4:

Cement the saddles and the cast 4x4's to the top of the frame. The saddles are located just inside the four rivets on the raised plates on top of the bolster. The 4x4's have a length of 2'-3" from the center of the bolster to the ends and 2'-11" from the bolster center to the middle. For a better fit between the tank and saddles add a piece of scrap 2x8 to the top of the saddles. Shape the saddles and 4x4's to fit the tank with a 7/8" wood dowel rod with some 120 grit sandpaper attached. Adhesive tape works well for this. Work slowly checking the fit of the tank with that of the saddles and 4x4's. The “L” connections on the bottom of the tank fit over the tank locating pad in the center of the frame.

Photo 5:

Attach the triangular gussets to the frame corners. Drill #76 holes for the stirrups and attach. I substituted flat copy staples for the stirrups as they're easier to bend. This is also a good time to install the corner grabs. Drill #78 holes above the bolts for the grabs. The end grabs are wider so the Tichy ones will need to be reformed or new ones created with 0.0125" wire.

Photo 6:

Use the general arrangement drawing to determine the location and bending points for the train line. Create the train line with the 0.020" wire. It sits on top of the bolsters and frame and is bent to get under the end running board. Attach the AB valve support on top of the brake reservoir brackets. Again I was lazy so instead of cleaning the resin part a piece of scrap 0.015 x 0.100 inch styrene was used.

Photos 7 and 8:

Take a good close look at the general arrangement brake details before installation of brake parts. The valve is installed as it would be on a boxcar with the cleanout and airline on the bottom. Predrill the reservoir, triple valve and cylinder for 0.010" wire. Attach the brake cylinder bracket 21" from the center of the frame and attach the cylinder to the bracket. Cement the AB valve, on the flat board over the reservoir. Connect the AB valve to the train line with the cleanout. Work through the various pipes; connecting the valve to the cylinder, then the retainer line to the back side of the running board; and the valve to the reservoir using the general arrangement (GA) for pipe locations. Finish up by installing the ratchet brake and retainer valve on the "B" end.

To finish up the frame for now attach the placard to the ends as per the GA drawing. Drill 0.015" holes in the top of the bolster plate at the back of the running board for insertion of the tank band rod.

Tank

Clean the interior cavities of the top and bottom tank sections to insure a good fit.

Photo 9:

Add the desired weight. I like using thin lead sheet from McMaster-Carr www.mcmaster.com as it's easy to cut and form. I also don't trust the glue joint between the weight material and resin so a styrene frame is made around the weight to ensure it doesn't rattle if it becomes loose. Keep the weight away from the truck crews so that the frame can be connected later to the tank.

Photos 10 and 11:

The handrail stanchions are attached to the tank bands at the side centerline. To determine the side centerline wrap a piece of tape around the tank and mark the top, between the rivets, and the bottom, scored line and again the top. Remove the tape and divide each of these two halves into halves. Reposition the tape on the tank aligning the tank marks. Now using an angle like that on a Northwest Short Line true sander mark the side center line on the tank. Mark the dome platform location which is even with the bottom of the dome collar. Next determine the horizontal tank center line under the dome. Measure 3'-0" in each direction and mark a line with a flexible ruler or piece of tape. These are the locations for the center tank bands. Attach the tank bottom to the top. Drill for 0.0125" wire and form and install four grabs at the lower tank corners and on both side of the dome. Use the upper nuts for the dome grabs. Remove the set of nuts and bolts on the center of the dome (these are for the 1917 frame car).

Photo 12:

Attach the tank to the frame with the dome vent on the "B" end, centering the tank on the pad at the center of the frame using rubber bands to hold the tank to the frame. When all looks to be square and vertical with the frame, cement tank to the frame using thinned ACC.

Photo 13:

You'll need to create the tank bands, two holding the tank at the bolsters and two near the dome which hold the tank to the underframe. Resin 1x4 material is provided for the bands. You could also use styrene or some of Pierre's etched bar material. Cut two bands 14' long for the bolster bands and 19' long for the frame ones. Attach about 5' long pieces of the 0.015" wire to the ends of the bands. You'll also need to create two connection castings for where the bands connect to the frame. These are 2'-9" between #76 holes drilled at each end.

Photo 14:

Run the ends of the bolster bands through the turnbuckles. Apply the bolster bands over the tank and into the holes drill through the bolsters making sure the bands are centered on the car. When good glue the wires to the bottom of the bolsters. Attach the connection castings that you made above as show on the photo. Fit the two long bands on either side of the dome at your previous marks and attach at the connections. The ends of the connections will need to be bent down some in order for the bands to fit. When the glue is dry trim the excess wire to fit.

Photos 15 and 16:

Attach the tank bands to the tank where the bands are in contact with thin ACC. Make sure the bands are straight before attaching them, When dry drill #78 holes on the center of the band over the marked line. Mark the end of the tank for the stanchion location and drill #78 holes. Precision Scale handrail stanchions are provided for the handrail. Drill out the castings with a #77 drill to ensure that a .015" handrail wire will fit. *(A note on prototype pipe sizes and model wire size. The handrails on these cars were constructed with 1 ¼" pipe. That's the inside diameter. In HO a pipe of this size has an outside diameter of 0.019", slightly larger than what's provided in the kit. Wire of 0.019" in size readily not available so 0.015" wire is supplied instead.)*

Precision Scale provides in each set two castings with cylinders that are wider than the others (three extra handrail stanchions are provide for when you lose one). Place one of these on each side of the tank. One on opposite corners is suggested. Place the remaining three on each side. (As I'm no good with fitting the handrail into such a small part I connect the rails with 0.020" stainless steel tubing.) Form the handrail by bending the .015" wire using the jig provided or by eye. There will be two pieces with each running down each side of the tank to the wide stanchions and including one curved end. Trim the ends of the pieces so that the ends of each meet within the wide stanchions. When satisfied, slide the two remaining stanchions around each end and attach them in the end of tank holes. Fix the wire ends inside the wide stanchion castings with glue. Soldering with a low wattage iron also works. Straighten the handrails as necessary by adjusting the angle of the stanchions.

Photos 17 and 18:

The dome platform and ladders on UTLX tank cars are usually installed on the side of the car with the brake cylinder. On these cars they are installed on both sides. Resin dome platform supports are provided. A better way is to use A-line stirrups for the brackets (provided in kit). Drill #76 holes on the bands on the line just under the dome collar. Straighten and cut the "A-line" stirrup in half and install into the drilled #76 holes on the tank bands. Trim the "A-line" stirrups 9" out from the tank side. Use scrap 0.010"x0.030" styrene to finish the platform support from the bottom gusset to the "A-line" stirrups. The other method is to bend the "A-line" stirrup into the shape of the bracket and attach. For some extreme modeling attach about 4" pieces of 0.005"x0.030" styrene on the tank band to finish off the brackets. Use a scrap Athearn gon for rivets and place two rivets on each of the 0.005"x0.003" pieces. Attach the dome platform to the brackets. Finish up by attaching bolted manhole cover on top of the dome along with the vent.

Final Detailing

Before proceeding we recommend that you use a cradle of foam to hold the model in order to ease installation of the brake components.

Photo 19:

The lever hangers are located on the underside of the underframe with NBW castings. Drill #78 holes on the insides of the nuts, form the hangers and attach to the underframe. Install the small brake lever to the pivot point on the A end of the car and the larger lever to the brake cylinder with the levers being located through the hangers. Run 0.0125" brass wire between the levers and the bolsters and between the levers using the turnbuckles as clevises. Form a loop with a short piece of the 0.0125" wire and slip a scrap piece of chain into the loop. Form another loop on a long piece of 0.0125" wire slipping the other end of the chain on this loop. Cement the short 0.0125" wire into a clevis made with a turnbuckle. The long 0.0125" wire is attached to the bolster.

Photos 20 and 21:

Install the side placards using the GA to determine the location. Install couplers of choice and covers. Before installing the cover drill a #78 holes on the end and install one of the etched eyebolts. Install coupler cut lever brackets. Form cut levelers with some scrap 0.0125" wire and attach to the bracket and coupler cover. Install the brake wheel using the GA to determine. Finally install the ladders between the running and dome. You'll have to trim them and bend where the ladder meets the handrail. The model is now ready for paint.

Painting and Lettering

Wash the model again with Dawn and allow to thoroughly dry before painting. The entire model including the trucks is black. I like Scalecoat 1 No. 10 black as it provides a glossy surface for decals. Once decals are applied and all the air bubbles have been removed, spray with flat glaze. Install trucks and finish with the amount of desired weathering.

A note on trucks

The trucks also include a slight modification. The Tahoe Model Works Buckeye 50-ton trucks (TMW-106) are a fairly solid match for the prototype's trucks, but the truck bolster includes a vertical web through the center of the outside portion of the bolster casting. Replicated this feature by adding 0.010" x 0.040" strips into the center of the Tahoe bolsters.

