

CONCEPT MODELS

Web Address: <http://www.con-sys.com>
Email: concept_models@con-sys.com

8810 El Toro Way
Stockton, CA 95210

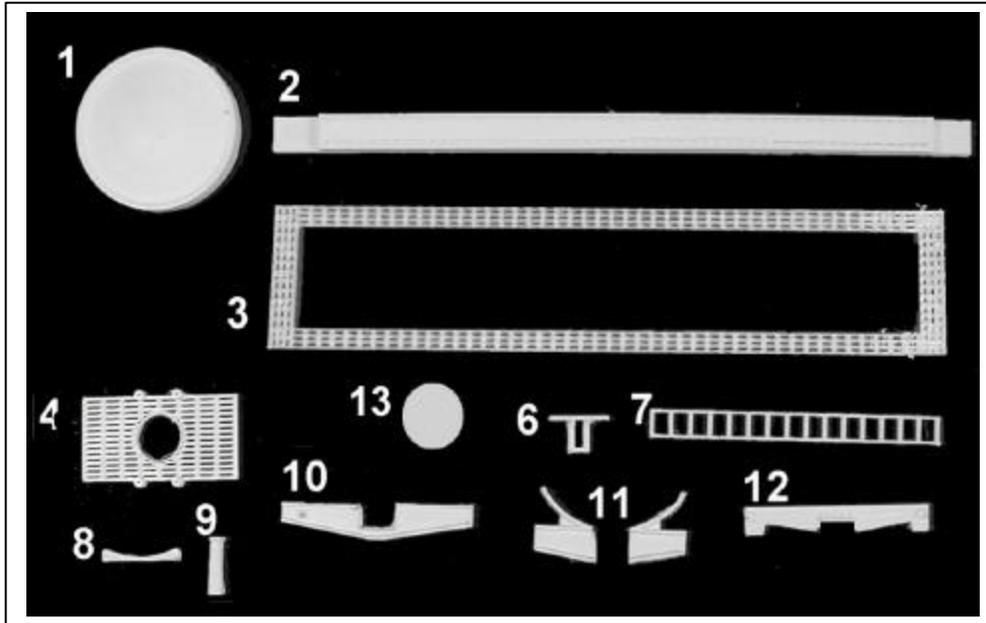
S Scale



INSTRUCTIONS FOR S SCALE 10 K GAL. TANK CAR

Rev B

10K S Scale Chem. Tank Car Parts



Item No.	Part No.	DESCRIPTION	QTY.
1	1134	Tank End – Recessed	2
2	8044-2	Bottom Frame	1
3	8044-3	Deck PLA	2
4	8044-4	Dome Platform	1
6	1129	Stirrup Step PLA	4
7	1135	Ladder Stock PLA	2
8	8044-8	Dome Platform Brace	4
9	8044-9	Dome Platform Post	4
10	8044-10	Cross Brace	2
11	8044-11	Tank Brace (PR)	4
12	8044-12	End Sill	2
13	8044-13	Dome	1

Part No.	GENERIC PARTS	QTY.
1098	BRAKE VALVE	1
1099	BRAKE RES.	1
1100	BRAKE CYL.	1
1101	BRAKE MECH. MT.	1
1102	BRAKE MECH.	1
1103	BRAKE WHEEL	1
1104	PLACARD HOLD.	4
1105	PLACARD MT.	2
1011	PIN, SHORT	1
1136	DRAFT GEAR	2
	1-1/4" PVC 30 s.f.	1
	Decals (set)	1
	Instructions	1

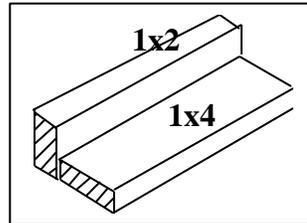
s.f = scale feet

Tools

All basic model workers tools – files, motor-tool with fine burrs, hobby knife, Wood blocks for holding parts square, metal square, etc.

Drills: #76, #72, #68, #50 (2-56 tap drill)

Music Wire .020” for handrails. Athearn stanchions may be used instead of music wire for tanks cars.



This fixture is a great aid to assembly. It helps hold parts square while gluing and aids in drawing horizontal lines on tanks for tank cars.

NOTE: This kit consists of both resin castings and PLA plastic parts. They must be assembled with an ACC cement (not provided. Solvent cements will **NOT** bond the parts together! They can dissolve them. Resin parts are more fragile than common styrene plastic used in injection molded models. Use reasonable care in handling and do not apply any solvents. Work very carefully when positioning the parts for gluing. ACC cements adhere very quickly and permanently.

PLA PLA is a plastic used in 3-D printers. It allows excellent details for parts that would not cast well otherwise. You can use a coarse file or a moto-tool on low speed to remove any flash. The walkways we make have a coarse top finish which adds to the appearance of a non-skid surface. When we make other types of patterns with a 3-D printer, we use Squadron’s Green Putty and use a cup brush in a low speed moto-tool on the dried hard surface of the putty. This creates a smooth burnished surface. This is also a good modeling technique.

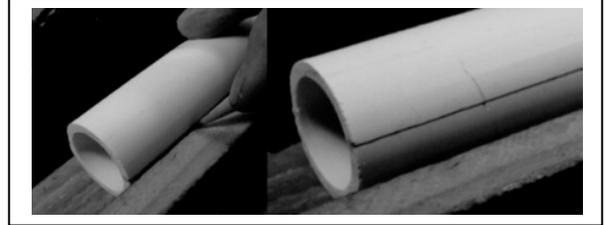
Gluing with ACC Cements – USE WITH CARE

ACC cements allow the modeler to work very quickly. A general rule is to use the thin cements to glue long joints taking advantage of capillary action that makes the cement run the length of the seam. An accelerator can be applied sparingly. One technique is to apply the glue to one part and the accelerator to the other part to be joined. A Q-tip to apply a minute amount of accelerator to the glue after the parts have been joined. The accelerator triggers the ACC cement to set very quickly.

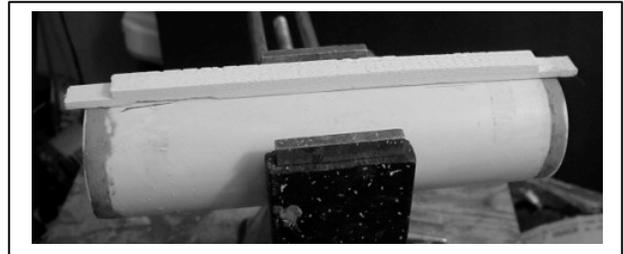
IF YOU WANT PAINT TO STICK Wash the resin cast parts before assembling with a dish washing detergent such as “Dawn”. Rub lightly with a soft sponge.

ASSEMBLY

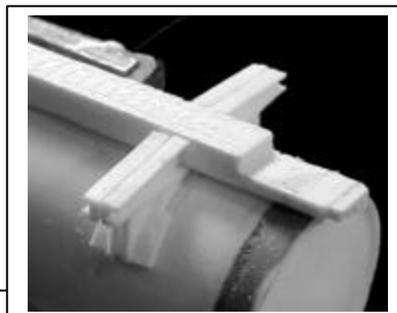
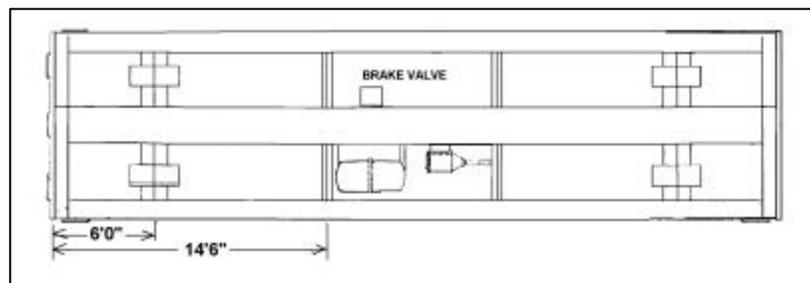
1 Clean the entire Main Tank Tube with lacquer thinner. Work fast since the chemicals can soften the PVC if left on for a long time. The idea is to remove the printed markings and take off the gloss surface. Draw a line the entire length of the tube using a straight edge as shown. Transfer the position of the line as shown and draw a second line 180 degrees from the first. Mark one "TOP" and the other "BOTTOM". This makes a center line top and bottom of the tank tube. Now use a square to draw two more lines 90 degrees from the first set. They will be for the handrails



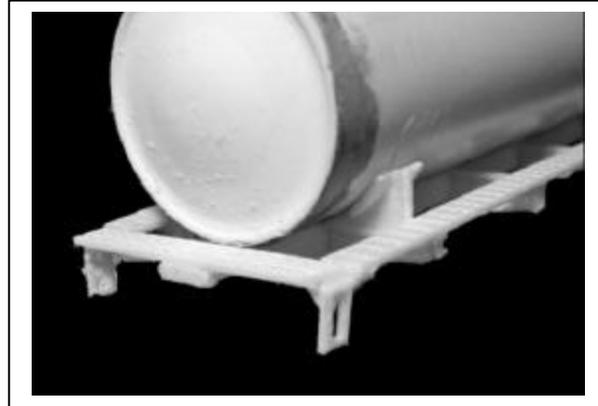
2 Add weight to the tube in the bottom center according to your own personal weighting preferences. Glue the tank ends to the tank tube and use a filler such as Squadrons' to make a smooth transition. Drop the walkway section over the tank (bottom). Do it now or there is no way to install it after adding the bottom frame. Now cement the Bottom Frame (2) to the bottom of the tank tube as



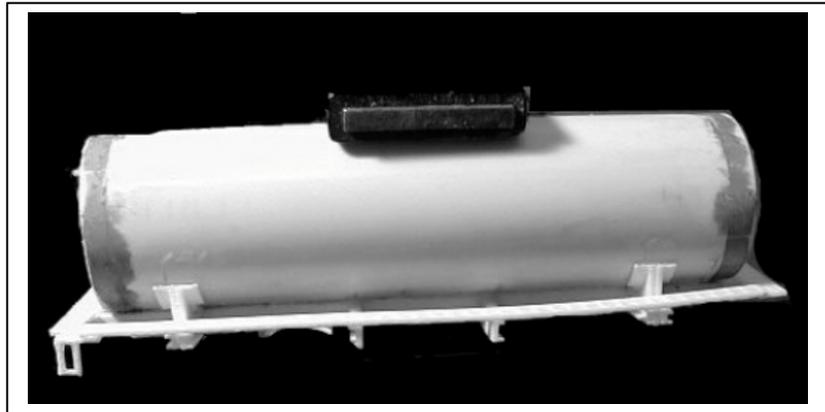
3 Cement the Tank Brace (11) halves together to make 4 braces. Locate and cement at the locations shown. Also add the cross braces (10). Make sure they align for step 4.



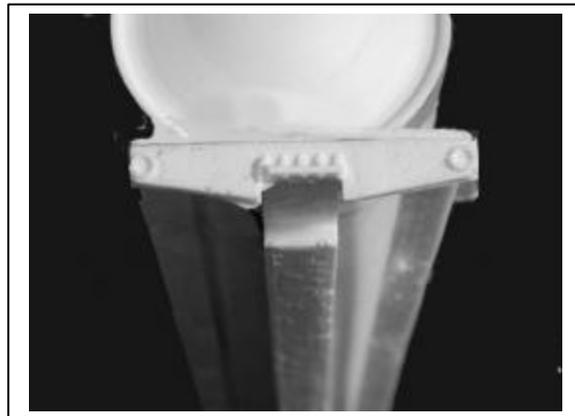
4 Work steps 4,5, and 6 together to get the deck and end sill to line up. Cement the end decks (5) to the bottom frame.



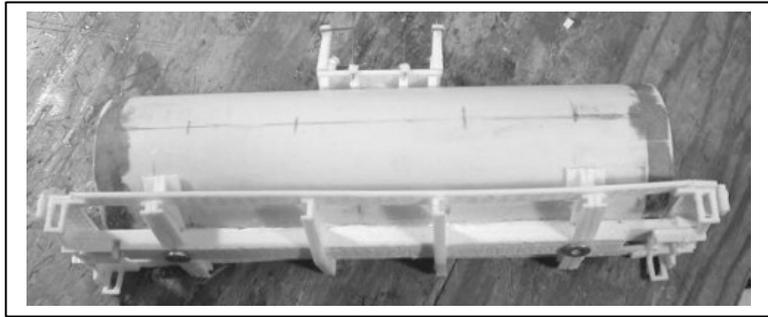
5 Cement the cross brace and tank braces to the tank bottom and frame. Add the Stirrup Steps (6) by trimming one leg off the part to get a close fit to the end.



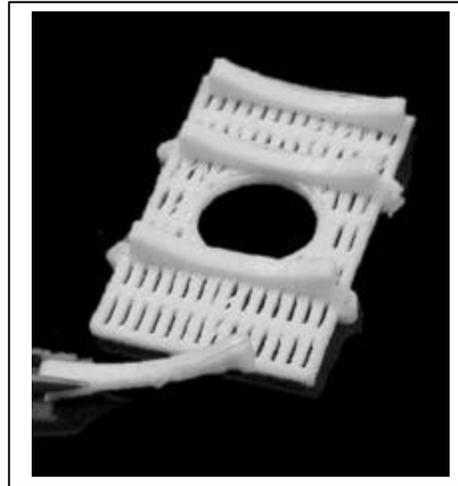
6 Cement the end sill (12) to the bottom frame and end deck. You can install the draft gear at this time.



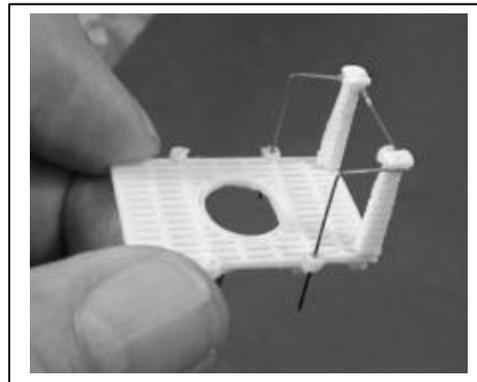
7 The handrails are attached as shown. If you are doing the Baker's Chocolate car, it is advisable to delay this step until after painting and decaling. I made the mounts by bending wire in an overlapping loop to get the smallest possible size for the hold and then trimming the extra wire away.



8 Add the four Dome Platform Braces (8) to the Dome Platform (4) as shown.



9 Bend .015" or .020" music wire (not supplied) in the shape shown and install the Dome Platform Posts (9) as shown.



10 Cement the Tank to to the top center of the tank and add the dome platform assembly as shown. Form the ladders by using a heat source. (Heat gun, hair dryer, curling iron etc.) The ladder should extend no more that one rung interval down from the side deck. Trim off the excess.



11 Cement the Brake Mech. Mount and the Brake Mech. Together as shown. Drill a #72 hole in the Brake Wheel and the mechanism and cement. Run the pin all the way through and trim at the back. Drill a 3/32" hole in the lower left of the "B" end of the tank and mount the assembly.



PAINTING

If you followed the instructions for cleaning the parts before assembly, you are ready to paint. A primer is recommended. Allow to dry overnight before proceeding with any of the color coats. White on top of primer is recommended for light colors yellow through red. It improves the color. When painting with white do not over dilute with thinner.

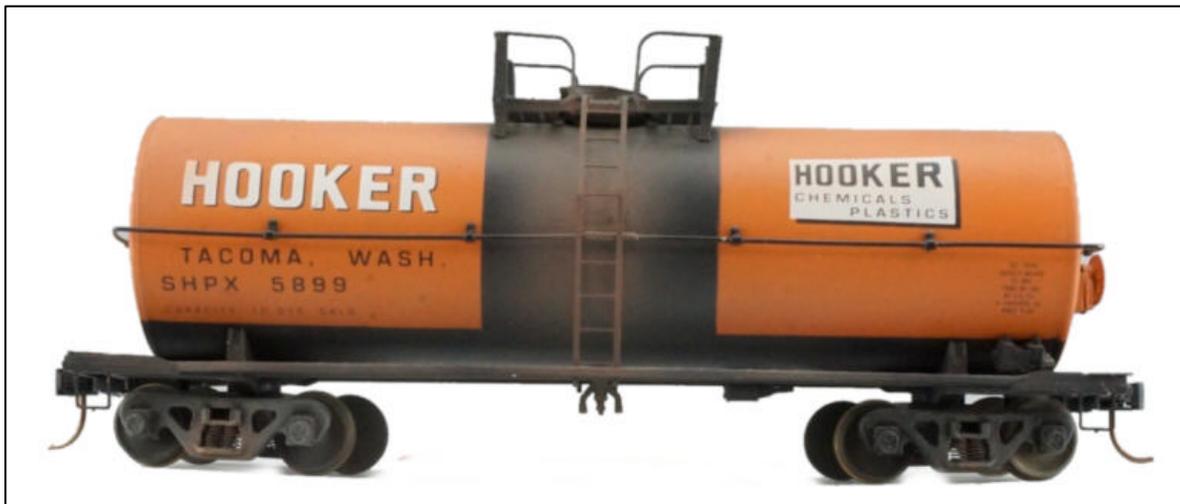
Now that Floquil has left the scene I'm buying paint from ACE hardware's enamel part of their rust proof line. The Rustoleum brand works as well. A half pint goes a long way. Dark colors can be diluted 50-50. Two coats with plenty of drying time in between are recommended.

After painting overcoat entire car with Testor's Glosscote prior to decaling. If you decal over the Glosscote as soon as it is just dry to the touch, decal adhesion is improved.

DECALING

NOTE: The decals provided are a very thin film decal film. Success with these decals depends on following these instructions. The glue used for the decal sheet is different than what has been used in the past. The water does not dissolve the glue. Water causes a chemical reaction causing an almost immediate release of the decal. For this reason once the decal has been wetted it must be used quickly. It cannot be re-wetted later for use.

- 1) Cut out the decal segment you are going to apply with a **SISSORS**.
- 2) Dip the decal in room temperature water which has had 1 drop of DAWN kitchen detergent. Do **NOT** leave the decal to soak in the water and slide off the backing..
- 3) Slide the decal directly off of the backing onto the wetted surface with a small brush or tweezers. Position with the brush. Remove excess water with a tissue.
- 4) A decal setting solution is recommended for best adhesion.
- 5) Top coat the decals with Testor's Dullcote for best results.



The Baker's Chocolate decal is rather large. You might have better luck transferring it in smaller pieces. The red lines show suggested cuts.

