

CONCEPT MODELS

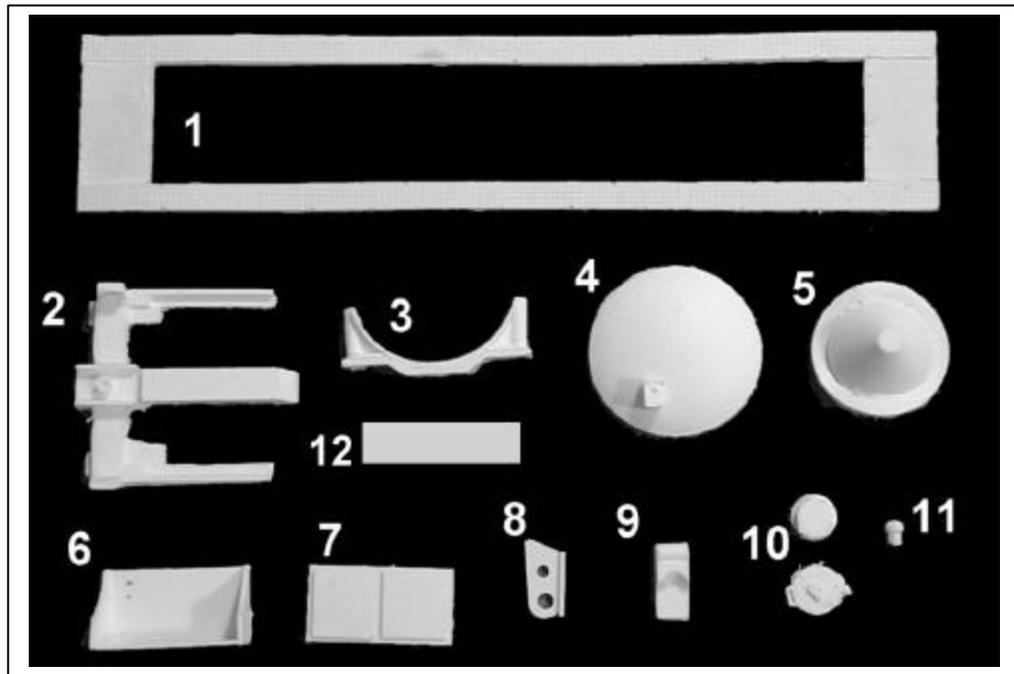
Web Address: <http://www.con-sys.com>
Email: concept_models@con-sys.com

8810 El Toro Way
Stockton, CA 95210



**INSTRUCTIONS FOR PRODUCT:
UTLX 80201-80375 DIFFERENTIAL PRESSURE TANK**

UTLX
80201
PARTS



Item No.	Part No.	DESCRIPTION	QTY.
1	3503-1	Catwalk	1
2	3503-2	Truck Bolster/Sill	2
3	3503-3	Tank Bolsters	2
4	3503-4	Low Pressure Ends	2
5	3503-5	Lading Port	3
6	3503-6	Control Box Frame	1
7	3503-7	Control Box Cover	1
8	3503-8	Manifold Mounts	4
9	3503-9	Hopper Pipe Supports	3
10	3503-10	Large Hatch & Mt.	2
11	3503-11	Vents	7
12	3503-12	Sill Deck	2
13	3503-13	Tank Layout Diagram	1
14	3503-14	Port Circle	3
15	3503-15	Tank Tube 40'	1
	3503-D	Decals (set)	1

GENERIC PARTS		QTY.
(s.f.) = scale feet		
DIA.	TUBING length in s.f.	
1014-0	3/16" Pan Hd. Screws	2
1020-0	Brake Reservoir (CM)	1
1018-0	Brake Valve	1
1019-0	Brake Cylinder	1
1041-0	Brake Mechanism	1
1010-0	Brake Wheel	1
	1/8" ID Washers	2
3/32"	x 14' - air to bottom	3
5/32"	x 2'6"	3
1/8"	x 32' - manifold	1
3/16"	x 3'	2
3/32"	X 32' - manifold	1
5/32"	x 2'6" - union	3
5/32"	1'6" - union outlet	3
3/16"	2'6" - union	2
3/16"	1'9" - union outlet	2
3/32"	3'6" - "T" connection	3
3/32"	8'0" - "L" to tank	1
1/8"	4'0" - "T" connection	2

Tools

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

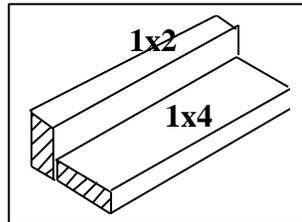
Drills: 1/8", 3/32" #76, #72, #68, #50 (2-56 tap drill), #65 - these should be in your toolbox.

Metal Items Needed

Music Wire .020" for handrails. Athearn stanchions for tanks cars.

Music Wire .032" to bend 3/32" tubing

Metal Ladder Stock – the ladders on the prototype look to be very light in construction. This scales out to a fragile but impractical ladder if cast in resin.



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 and hopper cars.

Instructions

NOTE: This kit consists of resin castings and must be assembled with an ACC cement (not provided) – both the thicker types as well as the thin. 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. Work very carefully when positioning the parts for gluing. ACC cements adhere very quickly **and permanently**.

Gluing with ACC Cements – USE WITH CARE

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. Use a Q-tip to apply a minute amount of accelerator to the glue

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

WARNING

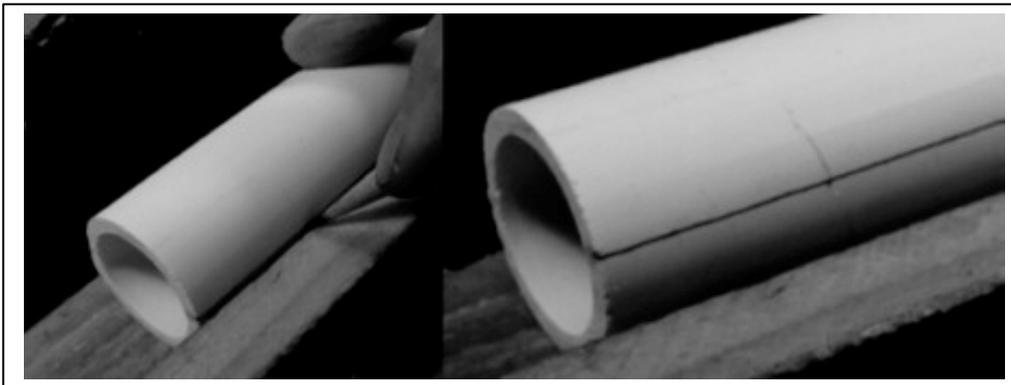
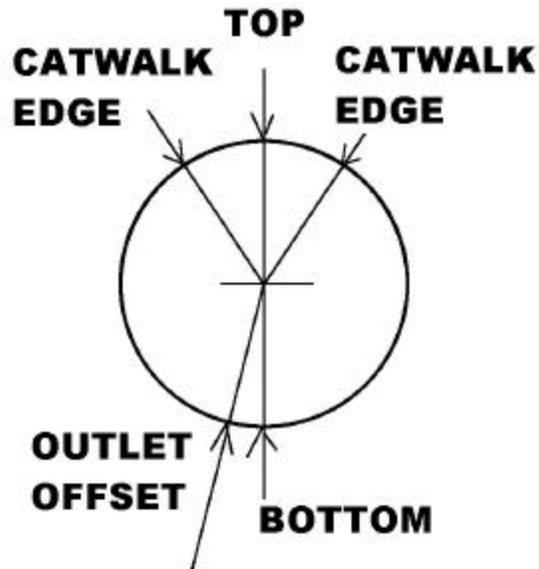
Some parts may have lead encapsulated within them. In the event the lead is exposed for any reason, do not allow it to remain on the skin. Dispose of any lead shavings that may result. Obey all safety precautions of all suggested cements and assembly materials.

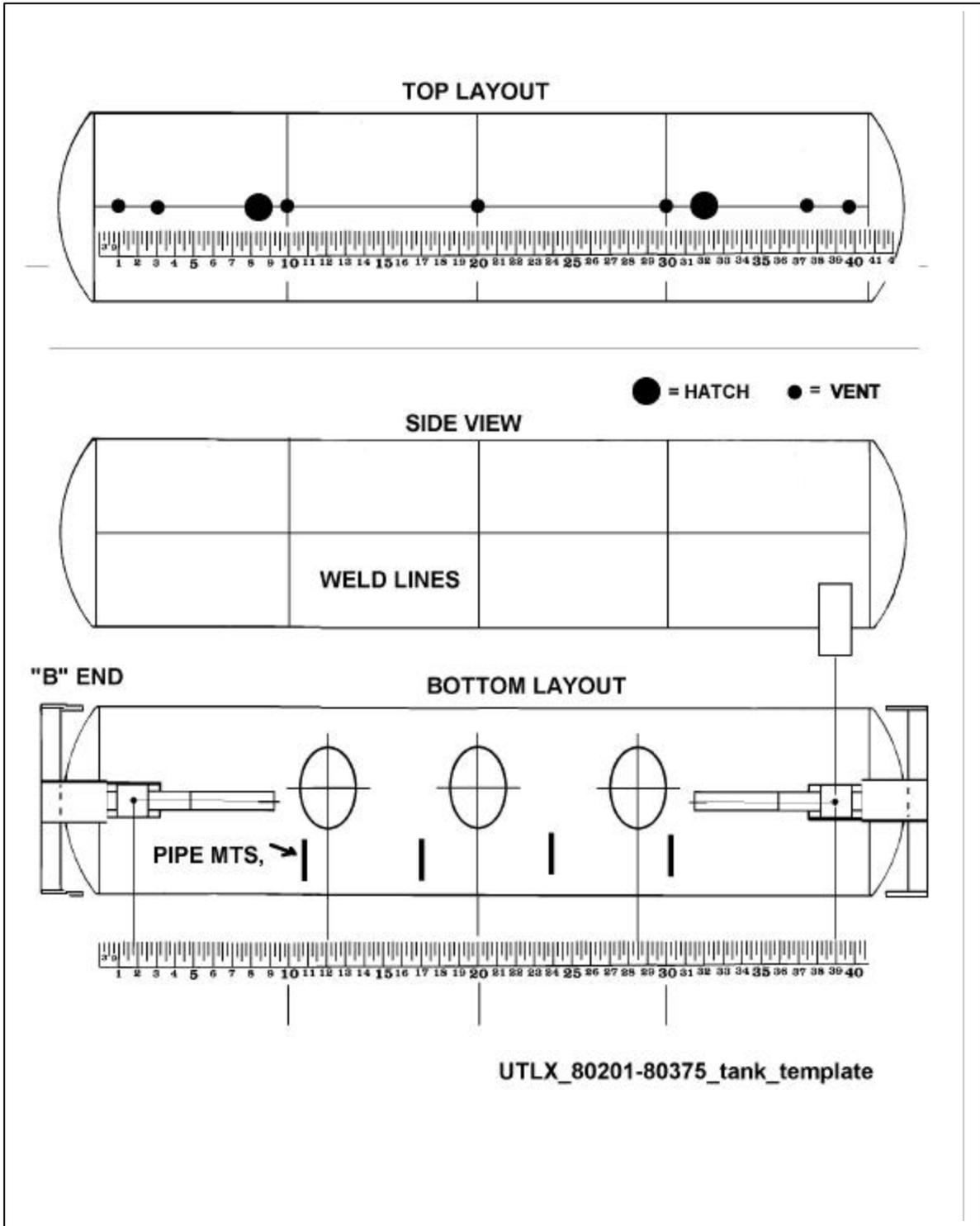
ASSEMBLY

1 Use a 45 degree centering tool to make opposite sides of the tube end. Extend the lines to the sides of the tube.



2 Align the top and bottom lines with the diagram below. Use the diagram to locate all of the longitudinal lines. Mark on the tube and then extend the lines the length of the tube using the fixture as shown.

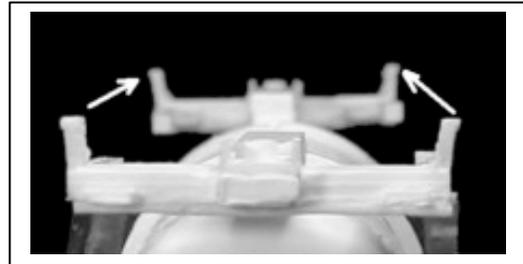




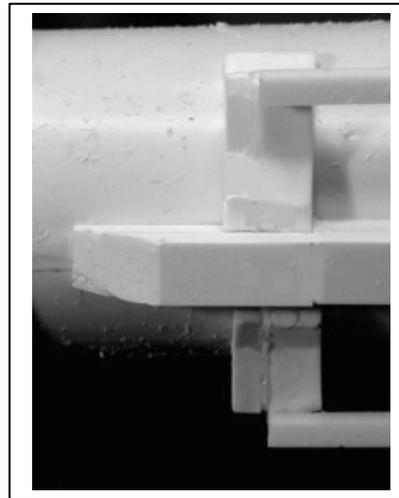
3 Add the decking to the end sills. The trailing side braces can be cut off since they are not used on this car. (The photo may vary from the actual part supplied.)



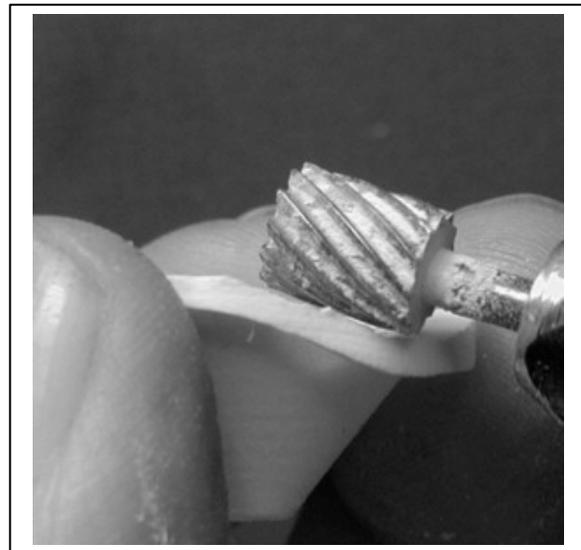
4 Cement the end sills to the tank as shown. The trailing edge of the deck should be in a line with the car end. The ends should line up parallel as shown.



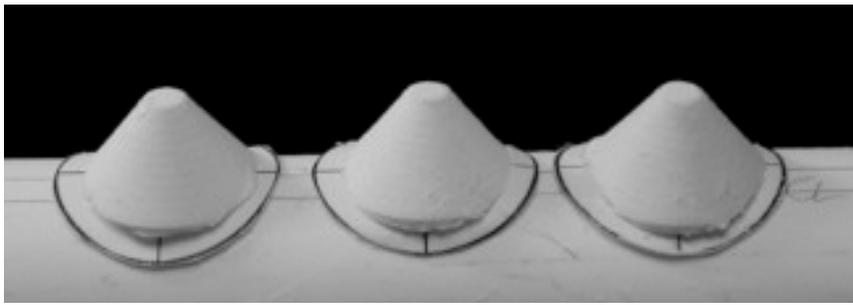
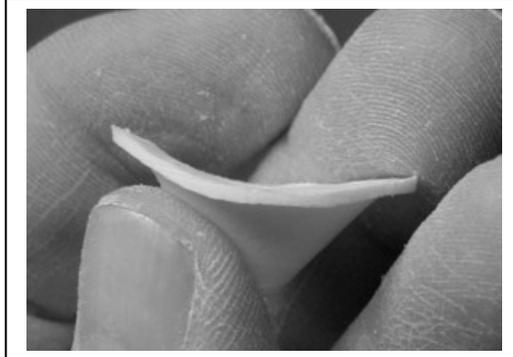
5 The four tank saddles should be prepared as shown. Place adjacent to the truck mounting position which you should have marked in earlier steps.



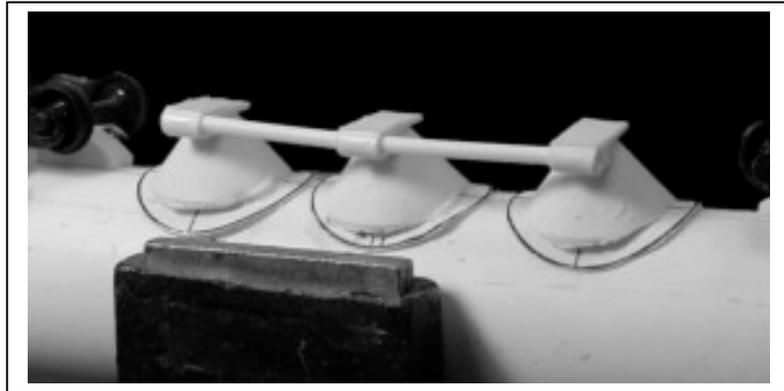
6 Since all of our parts have to have a flat side in the molding process, we developed this technique to aid in getting the contour to fit the port against the tank body. Use a motor tool on medium speed to carefully shape the ports. Follow the contour of the ring and thin it across the part to get the contour to go against the tank body. If you do this right, there will small gaps at opposite sides of the ring.



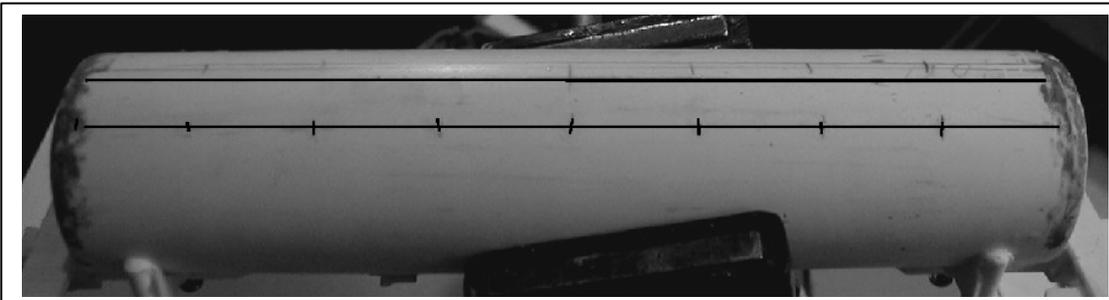
7 The contoured port will look like this. At this point you can either glue the parts directly to the tank body as shown or pop the ring off and use plastic circles in lieu of the contour ring. If you make plastic circles, make sure to use putty to cover any seams.



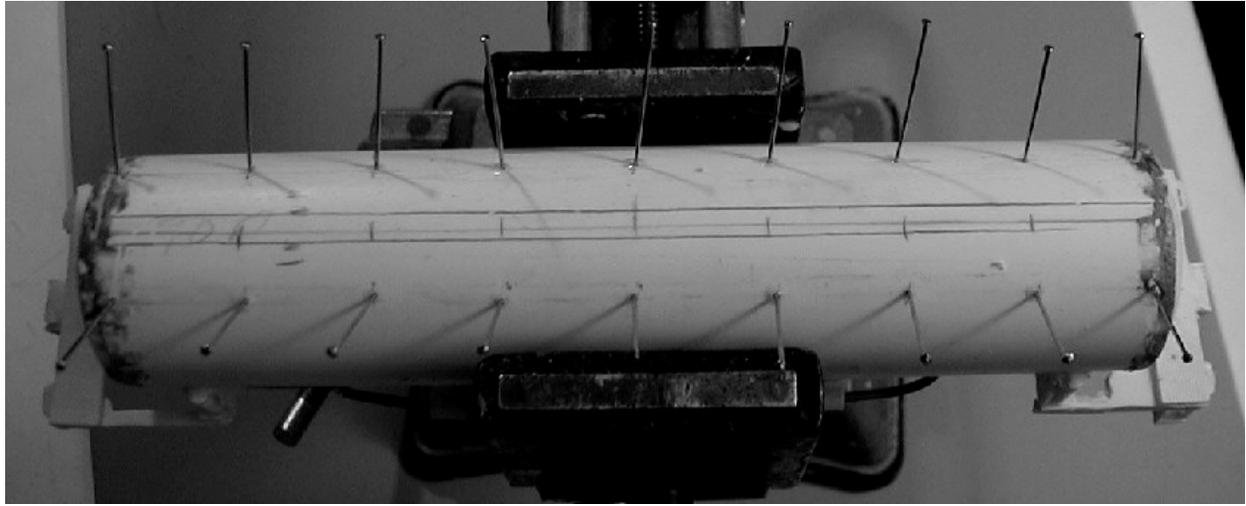
8 Drill out the hopper pipe brackets for a 3/32 tube. String the connections loose on the 3/32" tubing provided and then install the tube as shown starting with the center bracket. The tube should be trimmed so that it extends only half way through the end brackets. Non outlet side piping to be installed later



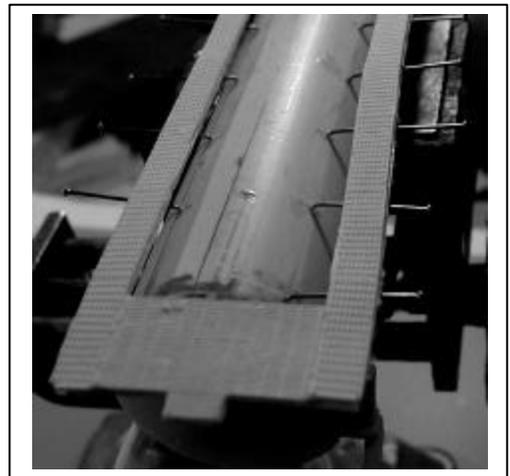
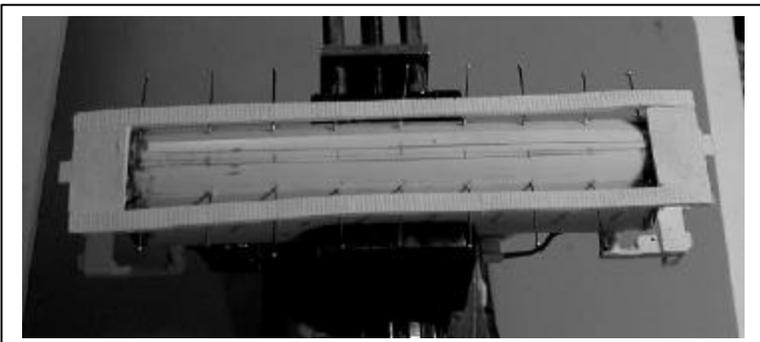
9 Applying the catwalk assembly – dual walkways Using the tank template, mark the tank tub as shown. The catwalk supports are about 5 scale feet apart. If you are not installing the double catwalk, go to step 12.



10 Drill holes in the tank tube with a #72 drill. Hammer in the dress pins as shown. Apply ACC cement to secure.



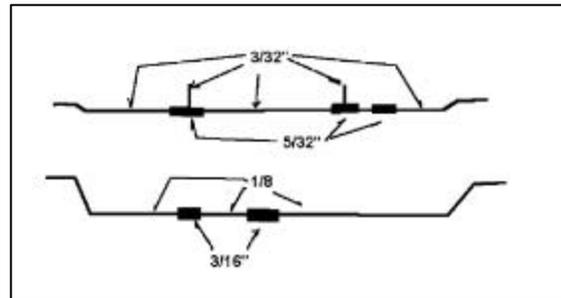
11 Use a ruler to bend all of the pins so that would be horizontal to the track. Start cementing the ends of the tank to get the catwalk even and square. You may have to notch the tank slightly. After the ends of the catwalk are secure, start cementing the underside of the catwalk to the pins. You might have to do this one at a time. Zip Kicker applied with a "Q" tip will speed the process. After all pins have been cemented to the catwalk, use a moto-tool with a cutoff disk to remove the excess pin



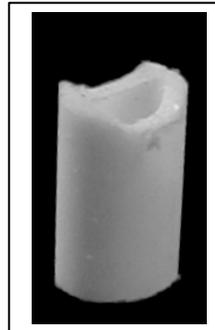
12 If you are modeling the higher number cars, cut one section of the walkway supplied and install in the top center of the tank. Install a single ladder in the top center of the tank. Install a single ladder in the center of each tank end. Otherwise install the ladders on the left side of the car end.



13 The side of the car opposite the three bays has a “plumbers nightmare”. All of the photos in our research show variations in the size of piping and the types. We are illustrating which we think is the most durable. You're welcome to use your own imagination here. Add the pipe mounts to the bottom of the car on the opposite side from the pneumatic outlets according to the tank diagram. Make sure to keep the end ones towards the center of the car to prevent the piping from interfering with the trucks.

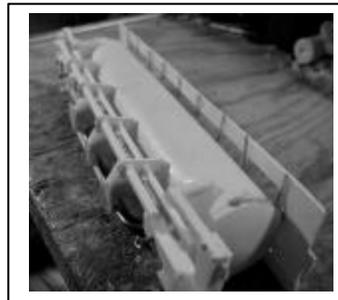


14 Make the five “Ts” by taking the short “union outlet” pieces of Styrene tubing and file a curved section as shown. Then attach the outlet piece to the “union” body as shown. A plastic cement may be used and is preferred, to attach Styrene to Styrene parts.

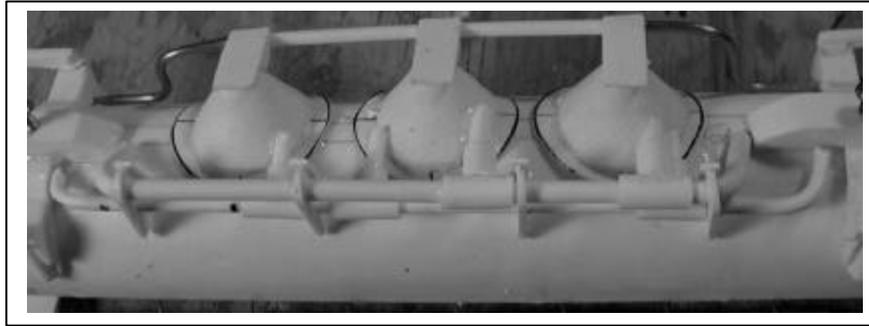


15 Thread the long 3/32” and 1/8” tubes through the manifold mounts and attach to the underside of the car as shown. **Do not cement the mounts to the long manifold tubes.** Cement the manifold mounts to the car body as shown. Make sure you position the two end mounts away from the end as shown.

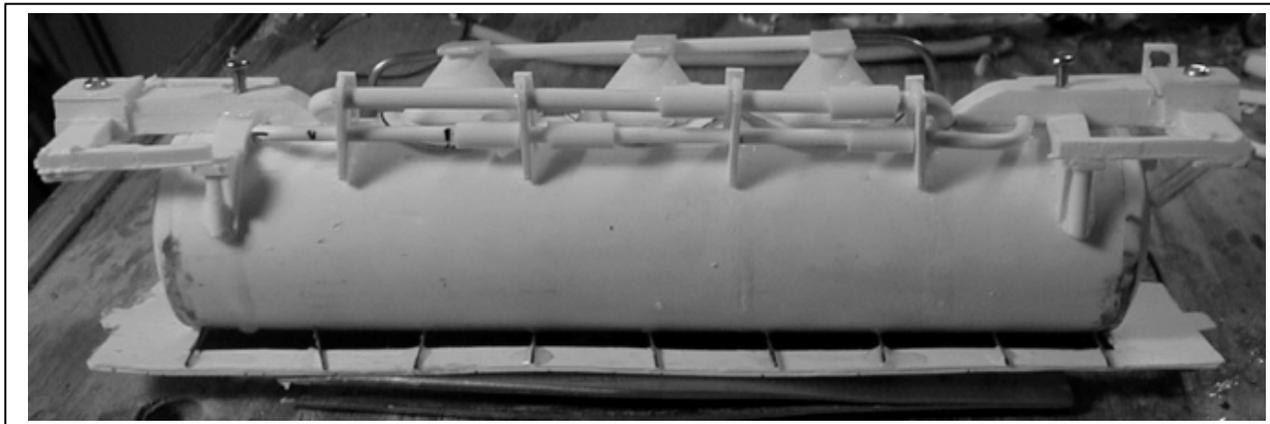
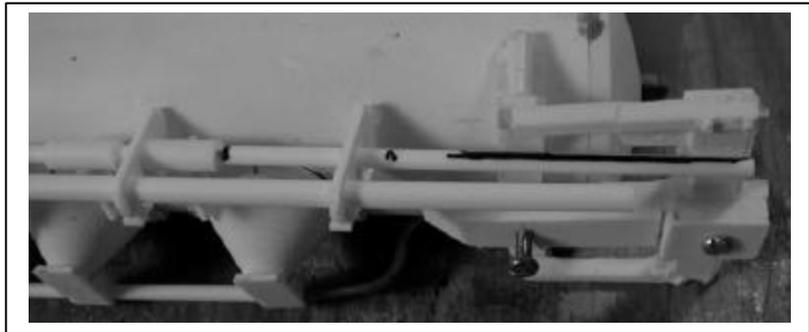
Now review the piping diagram previously shown for the next steps. You may substitute .032 wire in lieu of the 3/32 tubing to model a specific car.



16 After the cement has set on the mounts, remove the long tubes and slide on the "Ts" in the positions shown. Add the small outlet tubes and cement to the bottom of the car. We have no other data than this at this time. The appearance from the side of the car is the objective.



17 Cut the tubes and cement in the "Ts" as shown. The picture shows how to mark the end pieces for bending. Remove and bend with the appropriate wire size inserted in the tube. (.032" for 3/32" tubing and #14 for 1/8" tubing) The wire prevents the tube from collapsing. Trim to size after bending. Make sure to make the 1/8" tube bends tight in order to avoid interference with the trucks.



18 Attach the Brake Wheel with the small pin. The Brake reservoir supplied has to “legs” on the ends. With the air connections facing the outboard end of the car, file off the inboard flange. Cement to the car as shown.



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. When painting with white do not over dilute with thinner. Twenty five percent thinner should be sufficient with white and will ensure coverage.

- 1) Now that Floquil has left the scene I'm buying primer from ACE hardware as an enamel part of their rust proof line. A half pint goes a long way. Especially when you thin it 3 parts lacquer thinner to 1 part paint.
- 2) Dark colors can be diluted up to 50-50. Two coats of white with plenty of drying time in between are recommended. White on top of primer is recommended for light colors yellow through red. It improves the color.
- 3) 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 using a sissors, **not a knife**.
- 2) Dip the decal in warm 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.

