

CONCEPT MODELS

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

8810 El Toro Way
Stockton, CA 95210

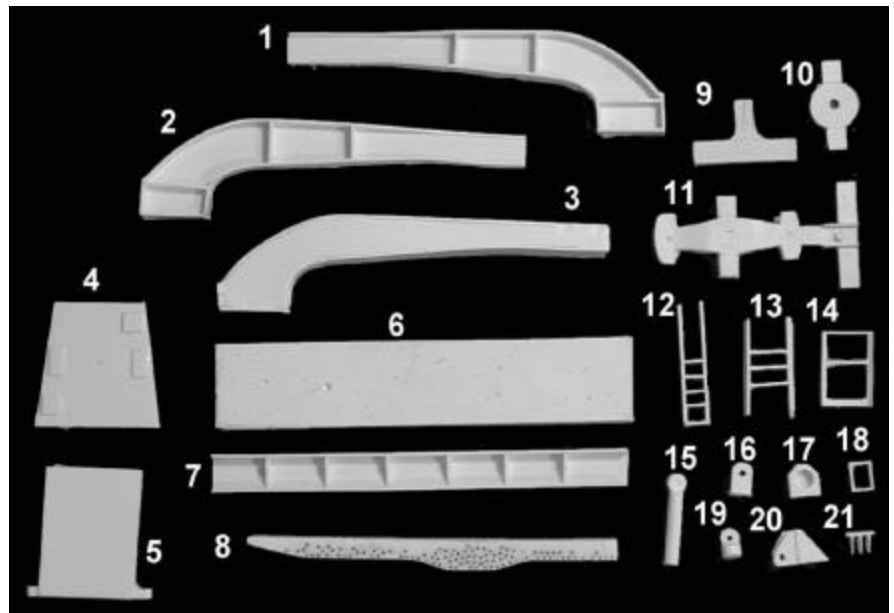
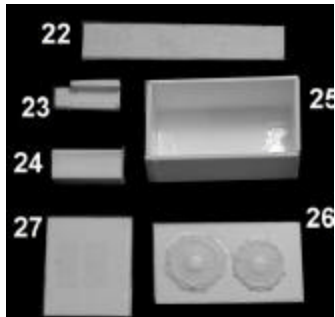


**INSTRUCTIONS FOR PRODUCT
GEGX 21154 DEPRESSED FLAT CAR**

GEGX

21154

PARTS



Item No.	Part No.	DESCRIPTION	QTY.
1	7053-1	Left Girder Face	2
2	7053-2	Right Girder Face	2
3	7053-3	Girder Core	2
4	7053-4	Hyd. Base Top	2
5	7053-5	Hyd. Base Bottom	2
6	7053-6	Girder Bed Core	1
7	7053-7	Girder Bed Facing	2
8	7053-8	Main Span Bolster	2
9	7053-9	Truck Bolster Platform	2
10	7053-10	Pivot Bearing	2
11	7053-11	Truck Bolster	4
12	7053-12	Ladder	4
13	7053-13	Hyd. System Frame	2
14	7053-14	Handrailing	4
15	7053-15	Hyd. Piston	4

Item No.	Part No.	DESCRIPTION	QTY.
16	7053-16	Hyd. Mounts	4
17	7053-17	Slide Mounts	4
18	7053-18	Stirrup Steps	4
19	7053-19	Hyd. Cyl. Connector	4
20	7053-20	Hyd. Piston Mounts	4
21	7053-21	Bolster Flanges	12
22	7053-22	Upper Walkways	2
23	7053-23	Walkway. - support	4
24	7053-24	Girder Mount	2
25	7053-25	Hyd. Enclosure Base	2
26	7053-26	Hyd. Enclosure Top	2
27	7053-27	Hyd. Enclosure End	4
28	7053-28	Air Tank	2
29	7053-29		
30	7053-30		

Tools

All basic model workers tools – files, motor-tool with fine burrs, hobby knife, Drills: 1/8", #76, #72, #68, #50 (2-56 tap drill), #65, and a #46 for making .080" holes for .080" rod.

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.

Gluings with ACC Cements – USE WITH CARE

This kit consists of resin castings and must be assembled with an ACC cement. 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.

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. I also use 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 -

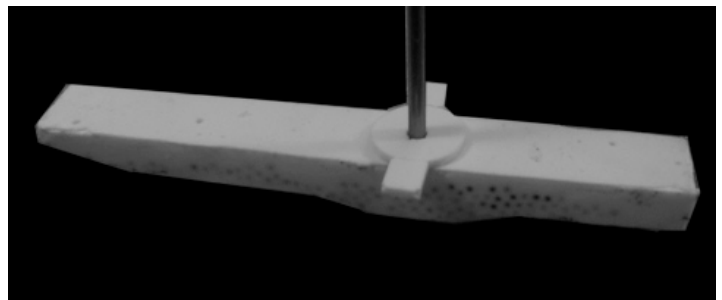
Wash the parts before assembling with a dish washing detergent such as "Dawn". Rub lightly with a soft sponge.

Part No.	GENERIC PARTS Sf = scale feet	QTY.
1014	1/8" Pan Hd. 2-56 Screws	2
1016	3/8" Pan Hd. 2-56 Screws	2
1017	1/2" 2-56 Phillips Screws	4
1093	Brake Stand	2
1041	Brake Mech	2
1010	Brake Wheel	2
1011	Pin, Short	4
1008	Coupler Cover	2
STYRENE TUBE sf=scale ft.		
1/4"X3sf	Hyd. Cyl.- Interior	4
5/16"x4sf	Hyd. Cyl. – Exterior	4
1/8"x4sf	Pivot	2
1/4" x 8sf	Slide support	2
5/16"x 4sf	Slide	2
STYRENE PARTS		
.080" rod	Hyd. Cly. Pin 2'3" long	8
	Decals (set)	1
	Instructions	1

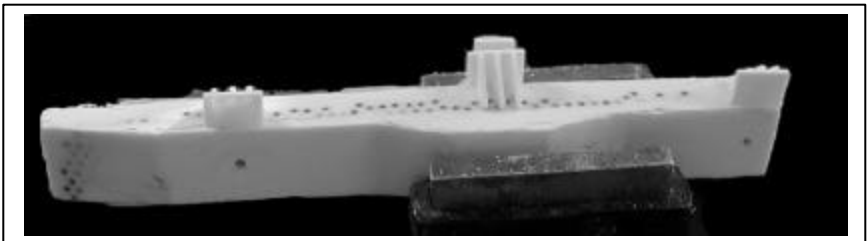
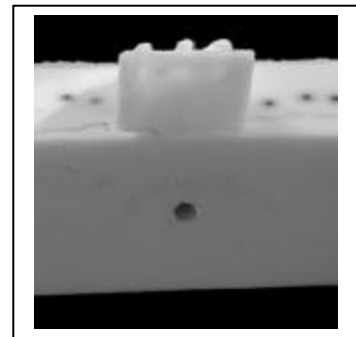
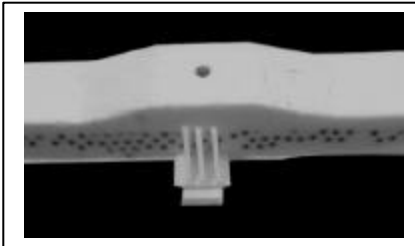
ASSEMBLY

It is important to assemble the car ends first.

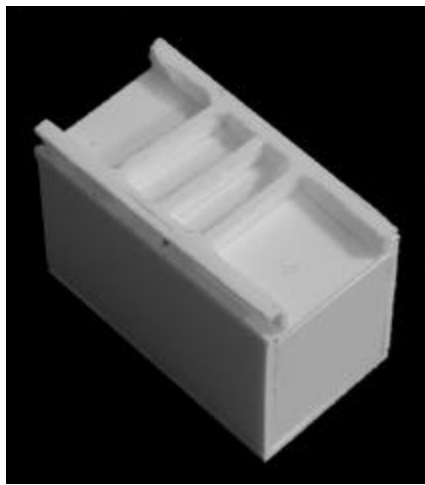
1 Use a 1/8" brass rod to position the Pivot Bearing or the 1/8x4sf Pivot and cement the Bearing to the Main Span Bolster (8). Cement the Pivot in place. (It may have to be trimmed later.)



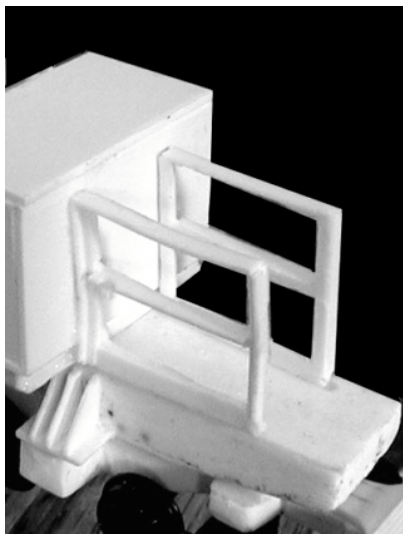
2 Attach the Bolster Flanges (21) to the Main Span Bolster as shown. The center one points up and tucks under the Bearing Mount extension. Trim to match the Bearing Mount. Two more are placed to engage the truck bolsters as shown.



3 Cement the Hyd. System Frame (13) to the bottom of the Hyd. Enclosure as shown.

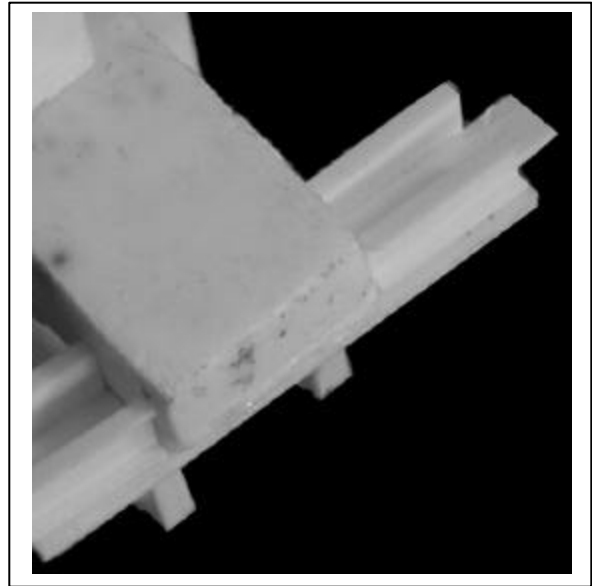


4 Cement the Hyd. Enclosure top to the Hyd. Enclosure then cement the louvered ends to the Hyd. Enclosure.

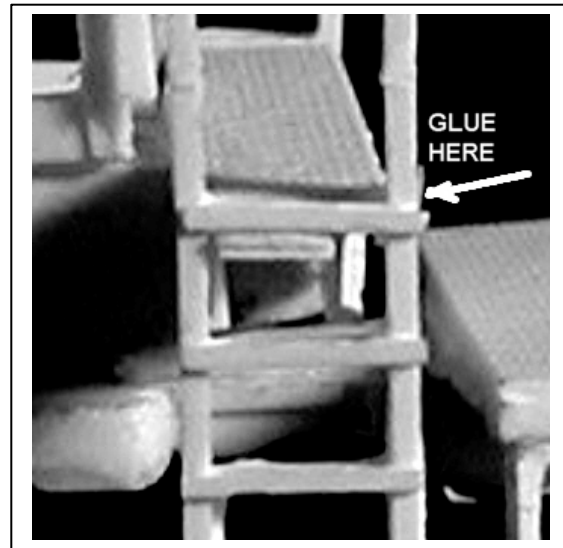


5 Attached the Hand Railings (14) to the Hyd. Enclosure and the Main Span Bolster as shown. The balance of the railings need to be fabricated from steel wire. (.020" is preferred -not supplied). Basically they are horizontal guards that match the hand railing part

6 Attach the Upper Walkways (22) to the end of the Main Span Bolster. Turn the assembly over and attach the Walkway Supports to the underside of the Upper Walkway and the Main Span Bolster as shown. The small appendage will stick out to attach the ladders in the next step.

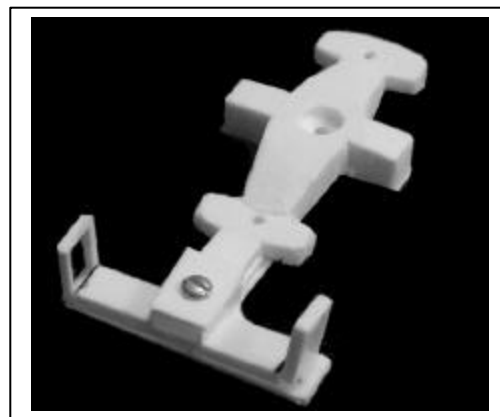


7 Attach the Ladders to the Walkway Supports with the top rung of the ladder resting on the walkway support. (Picture is of the original ladder pattern. New ladders are 5 step.)



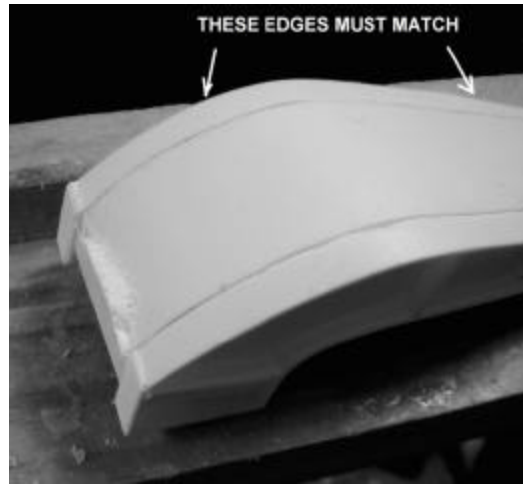
8 Add the Stirrup Steps (18) as shown. Trim the small side of the coupler cover to make a good fit as shown. Attach the trucks to the truck bolsters and then to the main span bolster.

Now check for clearances. The truck swivel can be improved by shaving away at the sides and bottom of the bolster to get desired clearance. Likewise check the main span bolster and shave the bottom as necessary to get desired clearance.

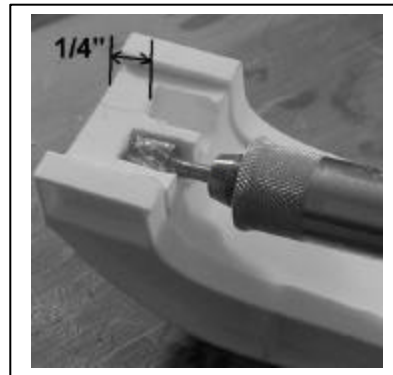


LOAD BED AND GIRDER ASSEMBLY

1 Cement the Girder Flanges (1&2) to the Girder Core (3). Make the edges match as shown. Not the slight difference in the flange and core.



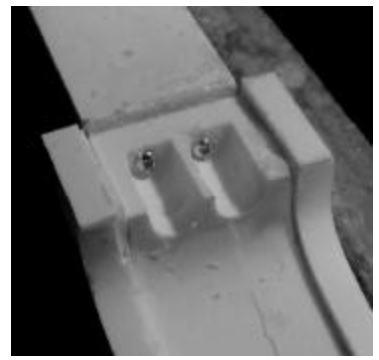
2 Using a $\frac{1}{4}$ " cutter on a motor tool, create two slots on the bottom of the Girder Cores as shown. Drill 2-56 clearance holes towards what will be the girder bed.



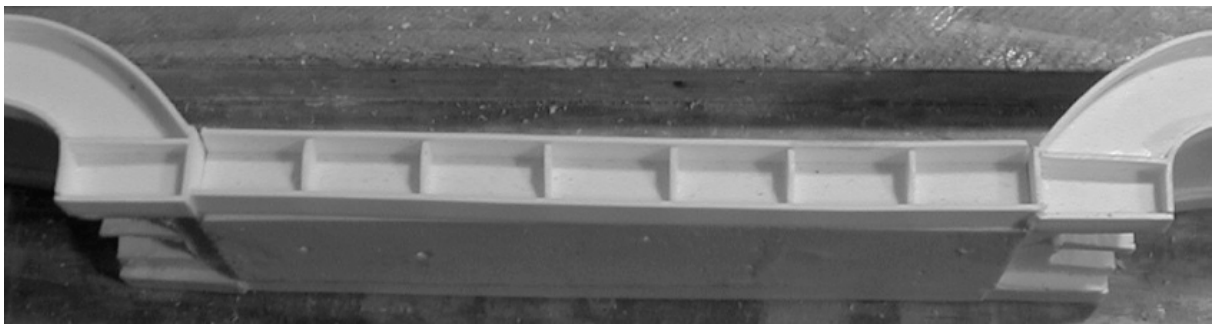
3 Match the Girder Core to the assembled ends and drill as shown in the next step. The core should be filed as necessary to get a good fit. Do not cement yet.



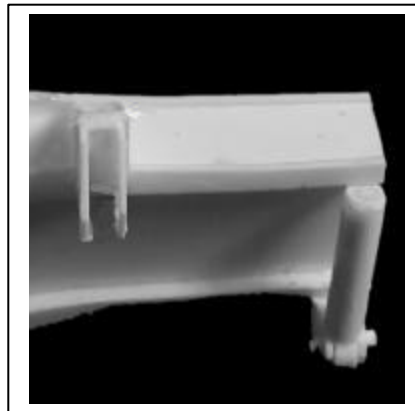
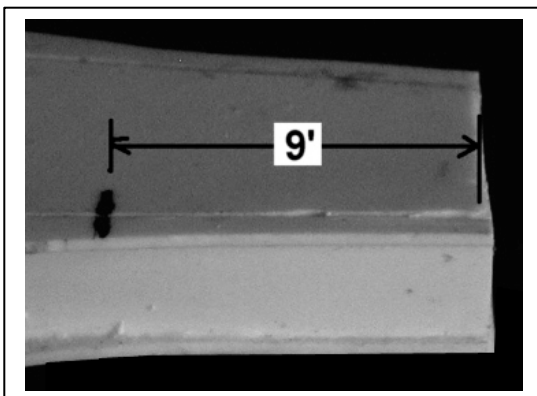
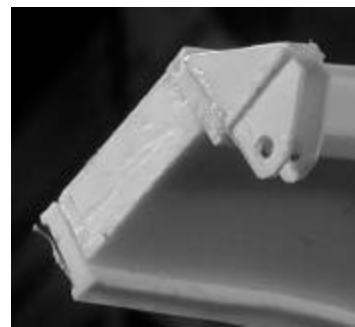
4 Drill with a #50 drill and tap for ½" x 2-56 screws. Apply the screws as shown but do not cement – yet! At this point it is a good idea to set the loosely assembled girder on top of the two end assemblies and check for clearance of the main girder to the track. If it sits too high loose the screws slightly. The end sections would normally slant towards the center of the car under load. The object is to get the bottom of the flat bed as close to the rail as possible to achieve prototype appearance.



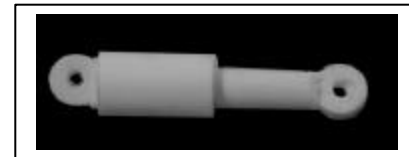
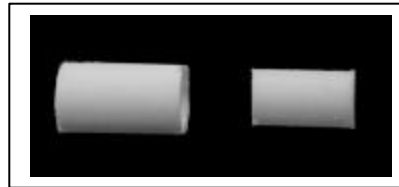
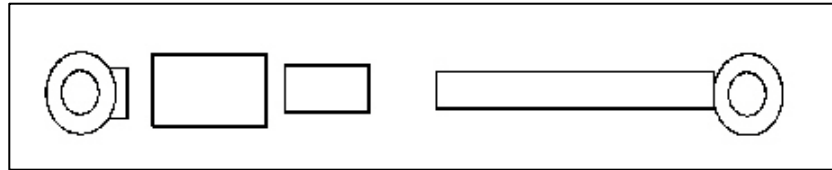
5 Fit the Girder Bed Facing (7) to the Girder Bed Core (6). Remove small amounts of material from each end until it fits, the cement in place.



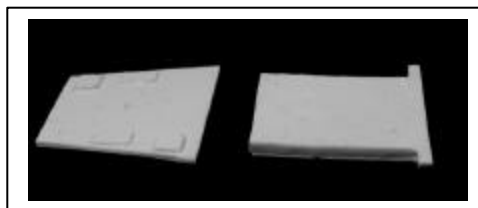
6 Remove a little bit of the lower girder edge and attach a Hyd. Piston Mount (20) to the one side of the girder assembly as shown. Measure 9 scale feet from the end on the other side as shown. Remove a small amount of the lower girder edge and install the second Hyd. Piston Mount as shown.



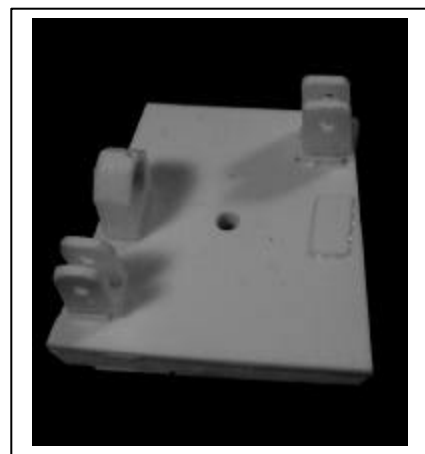
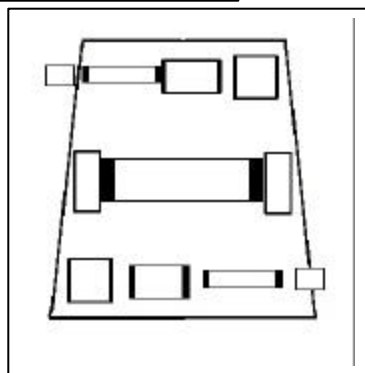
7 The hydraulic pistons are made up of 4 components – the Hyd. Cyl, Connector (19), Hyd. Cyl. Interior and Exterior, and the Hyd. Piston (15). Start by gluing the 1/4" tube into one end of the 5/16" tube, leaving room to cement the Hyd. Cyl. Connector at one end as shown. The holes at the ends need to be made with a #46 drill (.081") The larger tubing sizes have to be seen and the edges will need a little clean-up. Make 4.



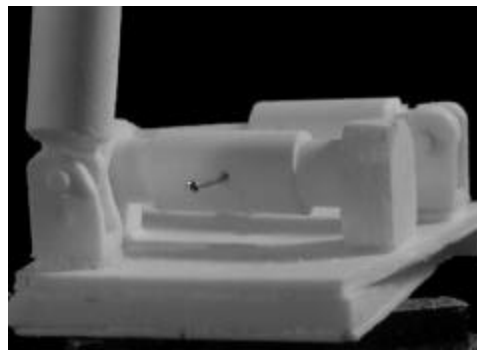
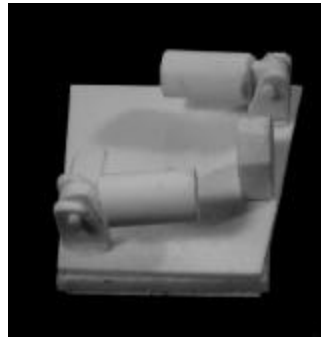
8 Cement the Hyd. Base Top (4) to the Hyd. Base Top (5) as shown. Make 2.



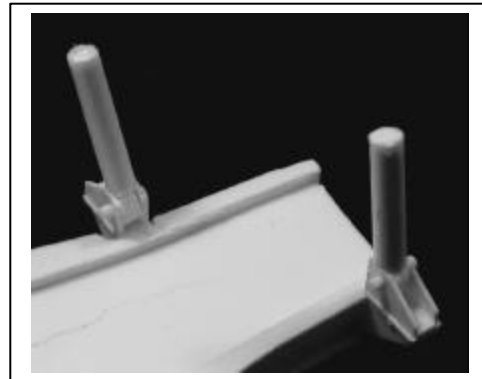
9 Cement the Hyd. Mounts (16) to the hydraulic base as shown. Add on of the Slide Mounts (17) as shown – just one for now. Make sure that the holes in the Hydraulic mounts have been drilled out to .081" with a #46 drill.



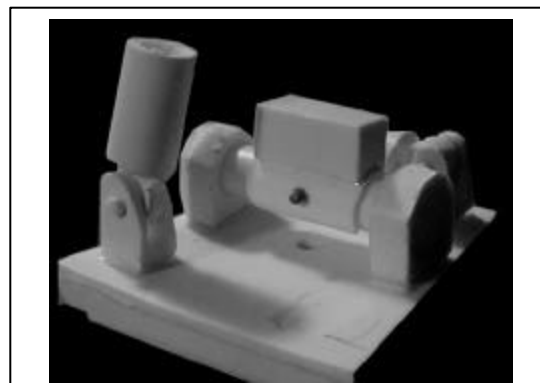
10 Attach the Hydraulic Pistons to the Hyd. Mounts as shown with the Hyd. Cyl. Pins (.080" rod). Prepare the Slide by cutting a 1/8" slot as shown. Attached the Girder Mount (24) to the Slide. A small bit in a motor tool will work. Fit the remaining Slide Mount to the Hydraulics Mount but **do not cement yet**. Snap the Slide onto the Slide Support and center it, Drill a #76 hole and install a pin in the slide. Remove the slide and elongate the hole in the Slide Support to allow upward and downward travel. Trim the pin and install flush. (In use I put a small amount of GOO to keep the pin in place.) Pin may be removed for sliding the load sideways. This may help if you are doing photography or realistic operation around curves heading into industrial trackage. Slide Mount, Set aside for the moment.



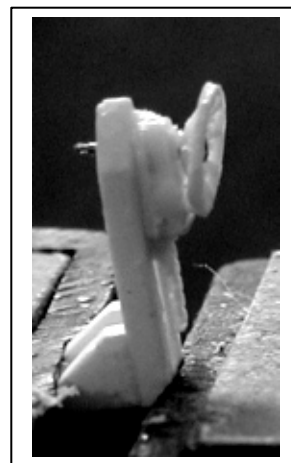
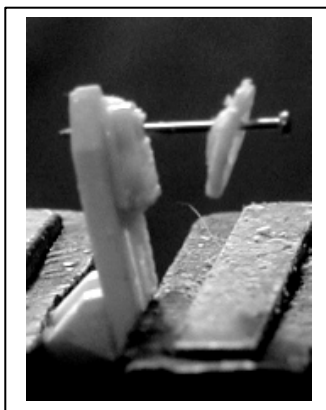
14 Install the Hyd. Pistons (15) on the main girder assembly – 4 places as shown on the one end photo.



15 Snap the Girder Mount assembly onto the Slide Mount. Thread the Hyd. Pistons into the Hyd. Cylinders and position in the center over the Hyd. Base. Look under the unit and mark where the Girder mount touches the Girder assembly. Lift the girder slightly and apply cement to attach the Girder Mount to the Girder assembly.



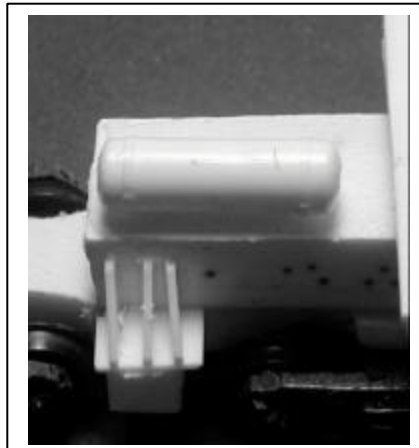
16 Attach the brake wheel mechanism to the brake stand and then drill a small hole and insert the pin and brake wheel. Add cement along the pin, front, back and center and press together.



17 After the cement has set. Attach the brake stand to the rear deck as shown.



18 File the boss on the Air Tank until it is flat; then attach to the inboard end of the Main Span Bolster as shown. Add the smaller air tank opposite the main air tank. (Not 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 and will improve 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.
- 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.

