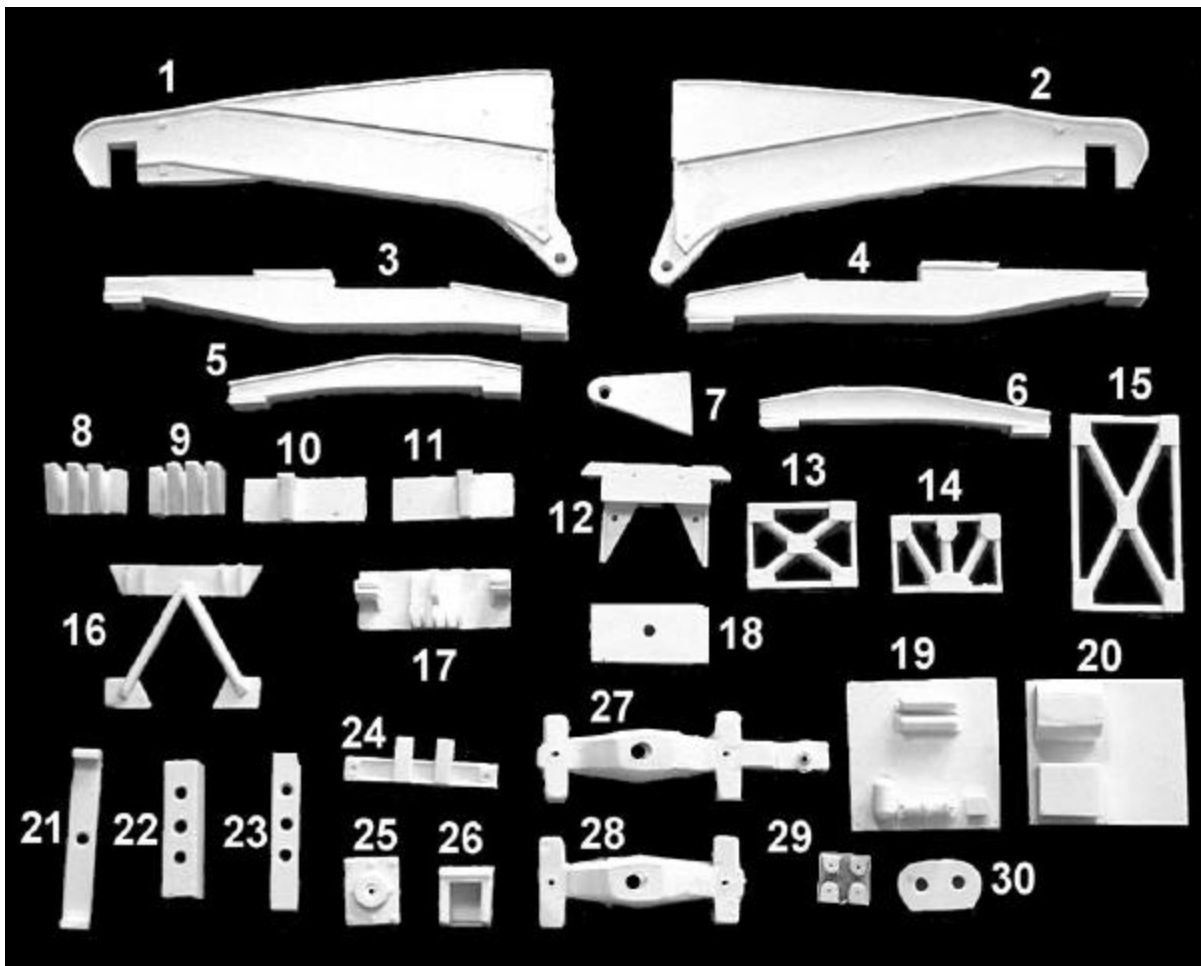


# CONCEPT MODELS

8331 Sheep Ranch Rd.  
Mountain Ranch, CA 95246



CPOX 820 SCHNABEL CAR

## Tools

All basic model workers tools – files, motor-tool with fine burrs, hobby knife, #55 (2-56 tap drill), 1/8” & 3/16” drills and 2-56 tap. Wood blocks and clamps for holding parts square, metal square, etc. 1/8” Round Brass Rod to be used for part alignment.

## 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! 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. The illustrations at the front show the general layout of parts for the car. Work very carefully when positioning the parts for gluing. ACC cements adhere very quickly and permanently.

## 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. The thicker cement is suited to applying large area parts to each other. 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. It is only slightly slower with the thicker cement.

### **WARNING**

Some parts 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.

**PREPARATION FOR PAINTING** Wash the parts before assembling with a dish washing detergent such as “Dawn”. Rub lightly with a soft sponge. Use a lacquer based primer such as floquil.

## PARTS

Item No.	DESCRIPTION	QTY.
1	Right Girder	2
2	Left Girder	2
3	Main Span Bolster – Right	2
4	Main Span Bolster – Left	2
5	End Span Bolster Left	2
6	End Span Bolster - Right	2
7	Lift Bracket	4
8	Main Bolster Brace – Left	2
9	Main Bolster Brace – Right	2
10	Deck Support – Left	2
11	Deck Support – Right	2
12	Girder Face Plate	2
13	Center Girder Brace	2
14	Front Girder Brace	2
15	Bottom Brace	2
16	Top Brace	2
17	Yoke Control	2
18	Pivot Bearing	2
19	Rear Deck	2
20	Rear Bolster Deck	2
21	Swing Down Catwalk Brace	2
22	Bearing Slide	2
23	Bearing Block	2
24	Rear Top Brace	2
25	Bearing Plate	2
26	Control Panel	2
27	Outboard Truck Bolster	2
28	Inboard Truck Bolster	2
29	Lift Rings	4
30	Empty Link	2
31	Rear Deck Step	2
32	Bolster Catwalk	2

Item No.	DESCRIPTION	QTY.
	1/8" x 11 s.f. .125" rod – main lift	2
	1/8" x 5 s.f. .125" rod – swing pivot	2
	1/8" x 2-56 Pan Hd. Mach. Screws – for coupler pockets	2
	3/8" x 2-56 Pan Hd. Mach. Screws	6
	1/4" x 2-56 Pan Hd. Mach. Screws	12
	Brake Wheels	2
	Brake Valve	2
	Coupler Pocket Covers s.f. = scale feet	2
	Hyd. Cylinders 3 s.f. x .188" Hvy Wall Tube	4
	Hyd Ram – 3.5 s.f. x .080" rod	4
	Brake Stands	2
	Small Pins	2
	Decals - set	1
	Instructions	1

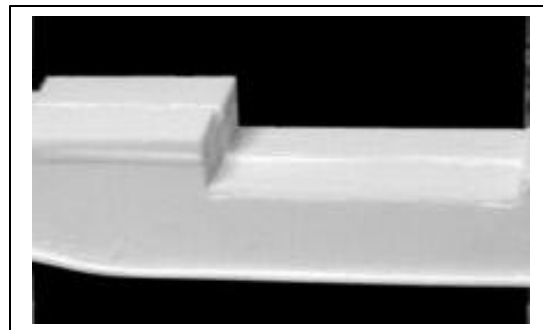
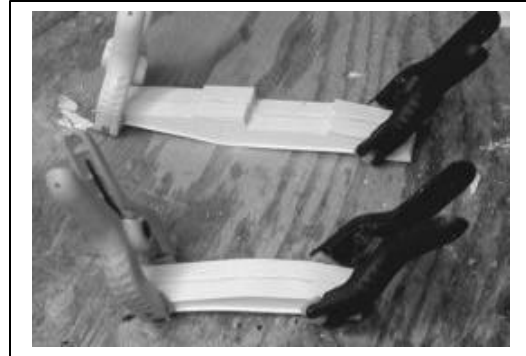
## ASSEMBLY

Make two each of the following items.

**1** Pair up the bolster pairs (3,4,5, & 6).  
File away any flash and make certain the parts fit together.

**2** Cement the bolster pairs together using ACC cement. Clamp and allow cement to set. (Usually a few minutes.)

**3** File the notch in the main bolster so the pieces are even. File the ends of the bolsters to be even.

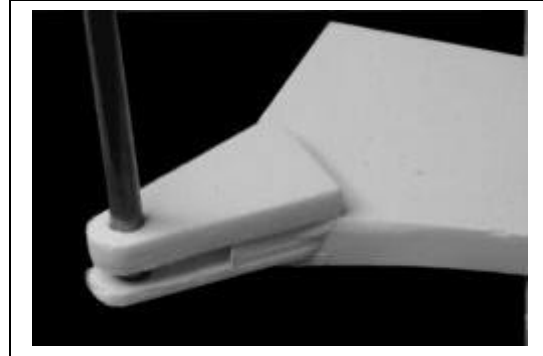


## Main Girder Assembly

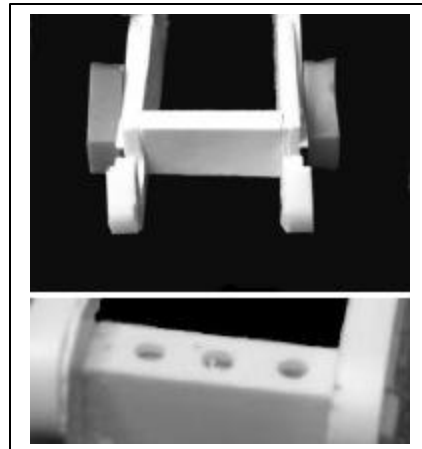
**1** Use a motor tool to cut away the inside of the main girders. This will allow the load lift assembly to interface to the girders. The remaining thickness should be no less than .040”.



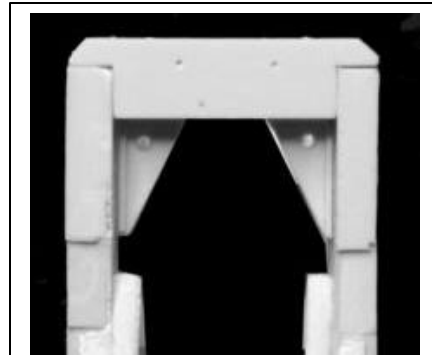
**2** Using a 1/8” brass rod cement Lift Brackets (7) to the inside of the main girder sections. Note the position of the lift bracket. It may be necessary to ream the holes with a 1/8” drill. Slide both girder sections on the brass rod for the next step to insure centering.



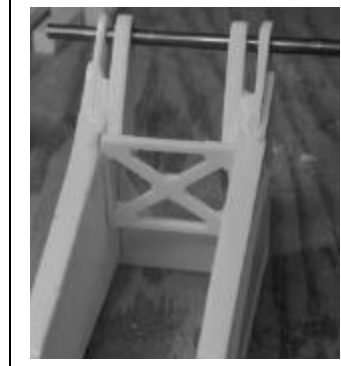
**3** Turn the girder assembly upside down and clamp Center Brace (13) as a temporary spacer. (We had used a handy spacer of the right size when picture was taken.) Clamp lightly and install the Bearing Slide (22) centered between the girders in the rear slot. Apply ACC cement sparingly to the outside of the Bearing Slide and the Main Girder.



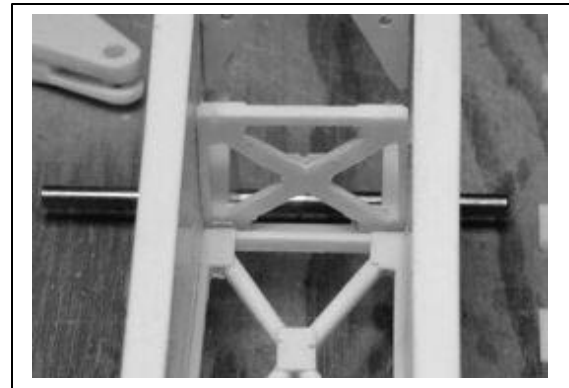
**4** Install the Girder Faceplate (12) as shown.



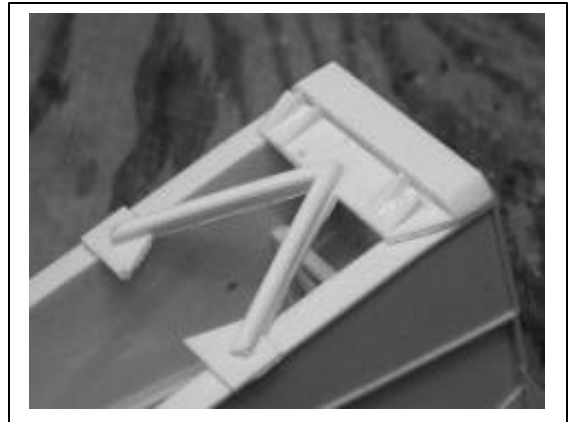
5 Install the Front Girder Brace (14) as shown behind the lift brackets as shown.



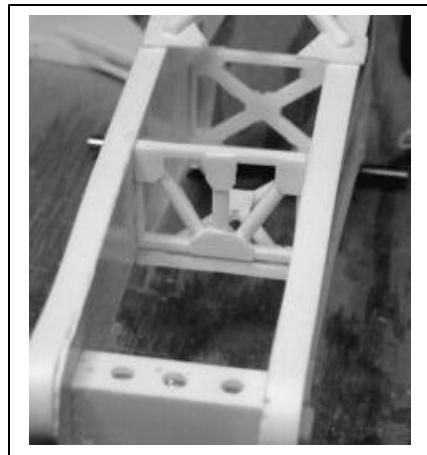
6 Install the Bottom Brace (15) between the girders against the front girder brace.



7 Attach the Top Brace (16) as shown.



8 Now cement the Center Girder Brace (13) against the bottom brace as shown.

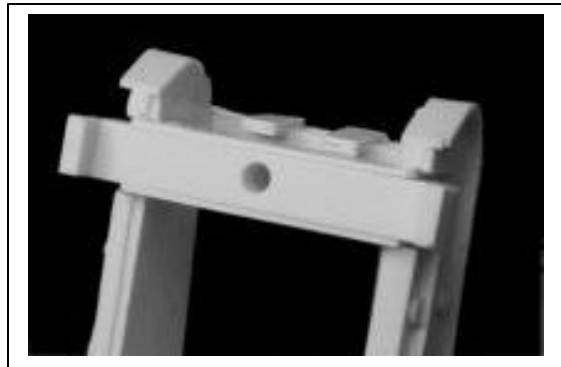


## Main Girder Details

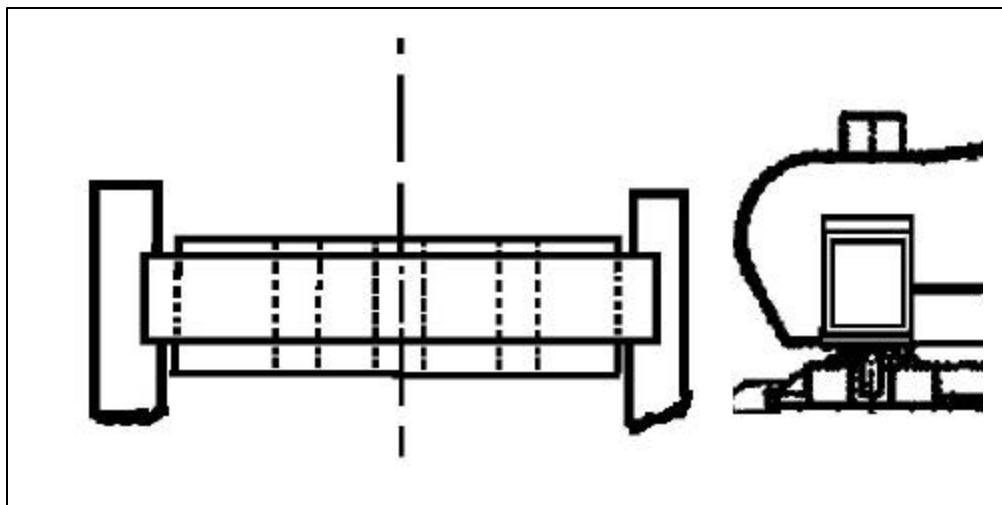
**1** Add the Rear Top Brace to the girder assembly. Make sure you do not cover the holes in the bearing slide.



**2** First add the Bearing Block (23) to installed Bearing Slide. **DO NOT CEMENT – THIS PART MUST MOVE.** You can use the 5 S.F. Swing Pivot rod to line up the parts. If it doesn't, turn end for end. Now add the Swing Down Catwalk Brace (21) to the assembly as shown.

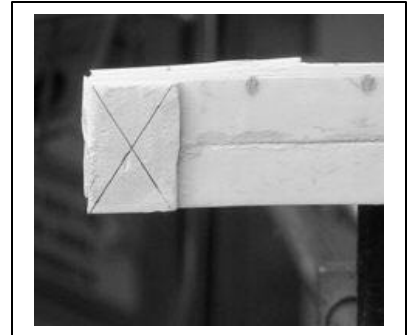


Part layout and hole pattern is shown below.  
Ream with 1/8" drill to ensure holes line up.

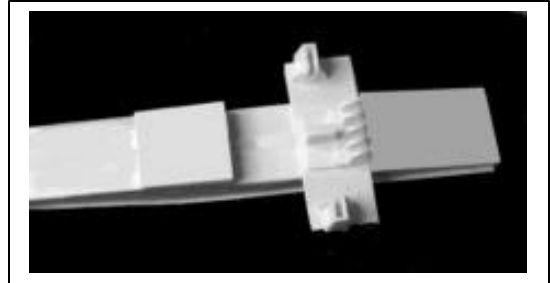


## Span Bolster Assembly

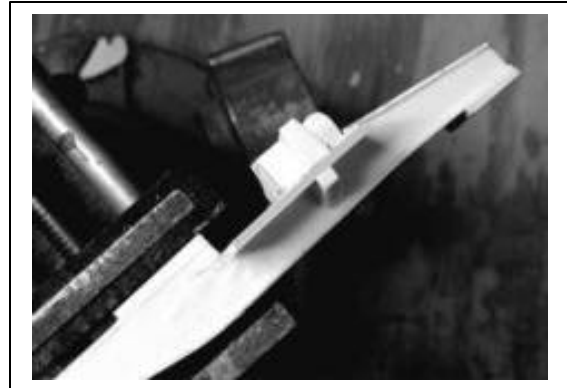
**1** Find the center of the pad on each end of the assembled span bolster as shown. Drill a hole for 2-56 tapping with a number 50 drill. Drill deep as possible without drilling through the top side.



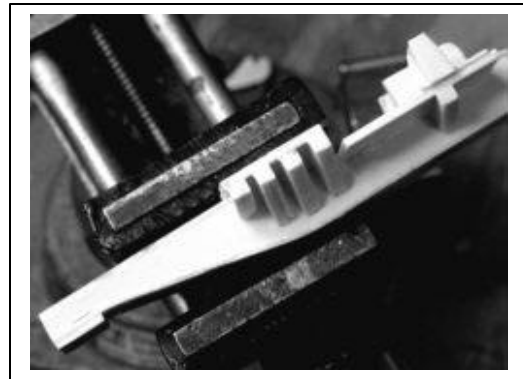
**2** Add the Yoke Control (17) centered at the front of the slot as shown.



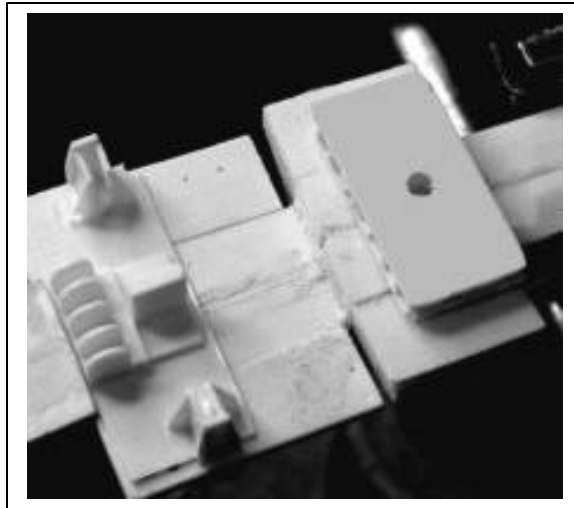
**3** Add the Deck Supports (10 & 11) as shown. They should be even with the slot surface.



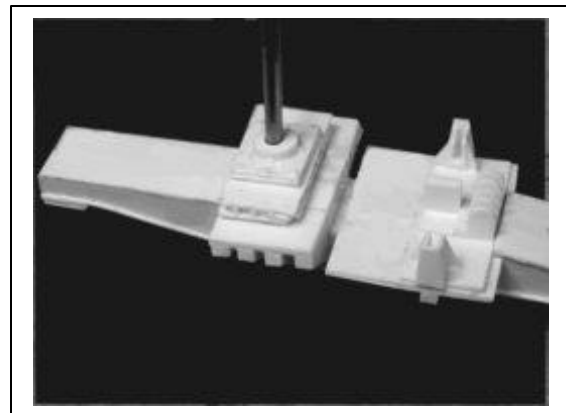
**4** Add the Main Bolster Braces (8 & 9) as shown. Note that the smaller brace is located towards the rear of the assembly.



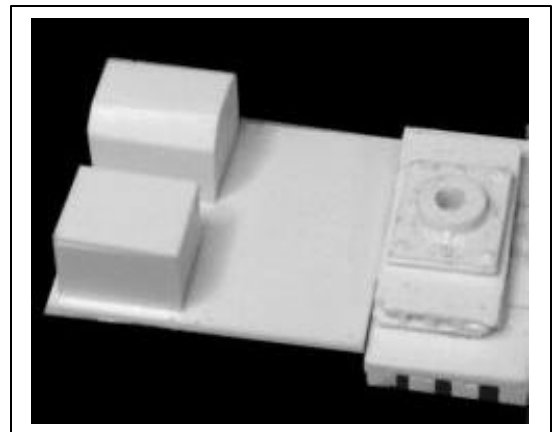
**5** Cement the Pivot Bearing (18) with the rear surface even with the Main Bolster Braces rear edges as shown. At this point fill all seams and deck areas with Squadron's Green Putty or Bondo to get a smooth even surface. File or sand after the filler is dry.



**6** Drill a 1/8" hole through the Pivot Bearing into the bolster assembly. Do not drill through.

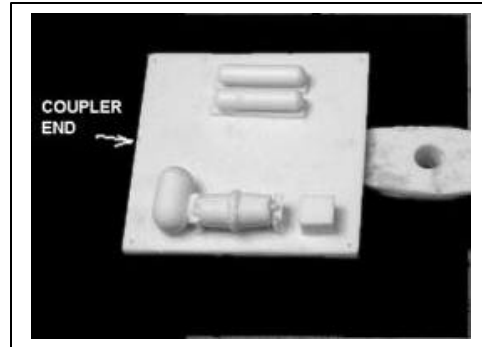


**7** Add the Rear Bolster Deck (20) centered on the bolster assembly.

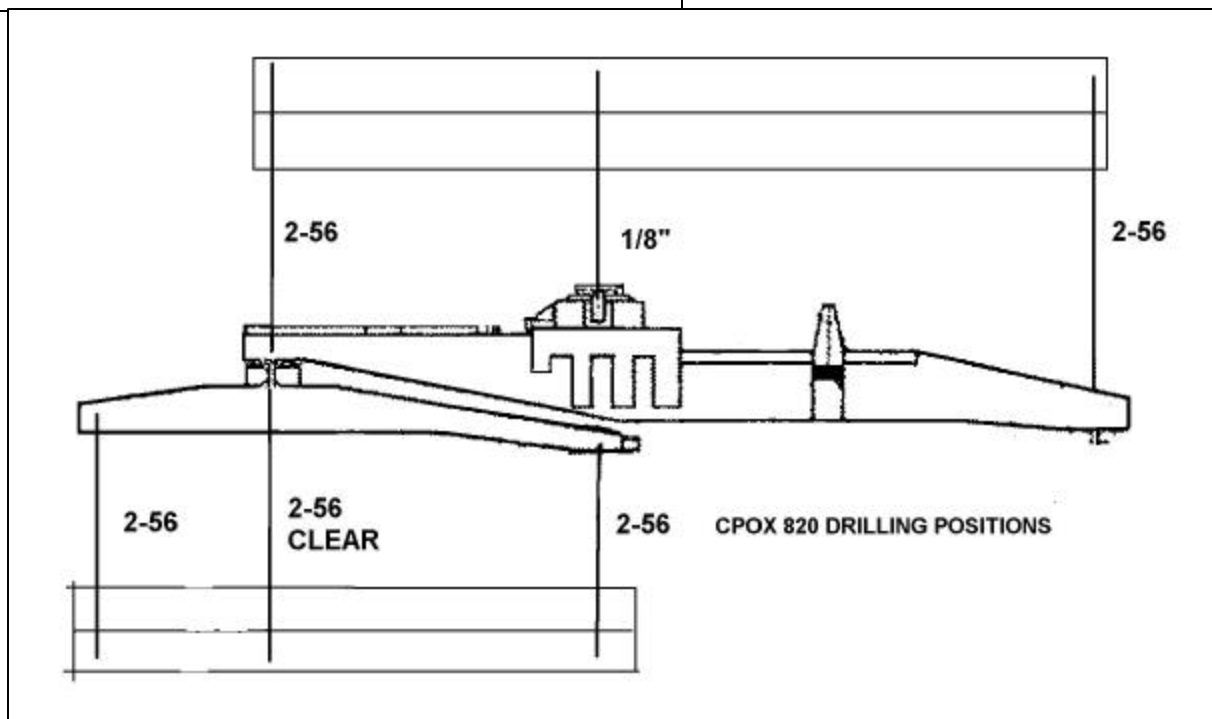


## Bolsters

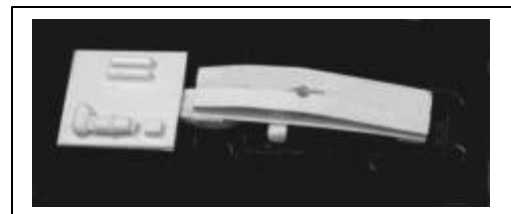
**1** Cement the Rear Deck (19) to the Rear Truck Bolster (27). The deck should be oriented toward the coupler end and centered as shown.



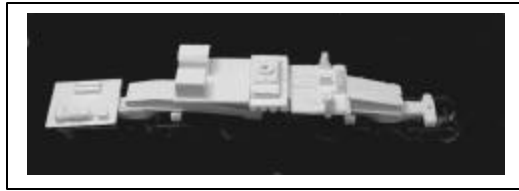
**2** Drill holes and tap 2-56 holes as specified in the following drawing. Drill the 1/8" hole in the bolster approximately 1/4" deep. Don't drill through.



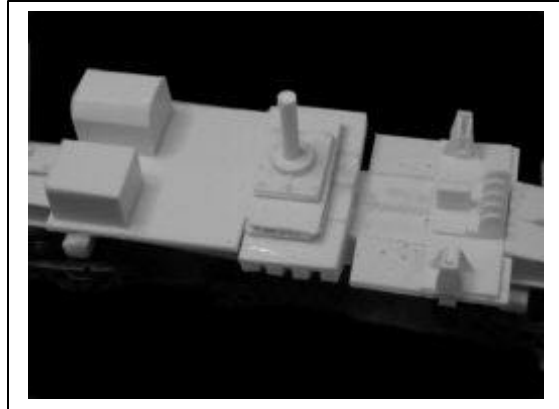
**3** Use the 2-56 screws provided to assemble the truck bolsters to the main bolster assembly.



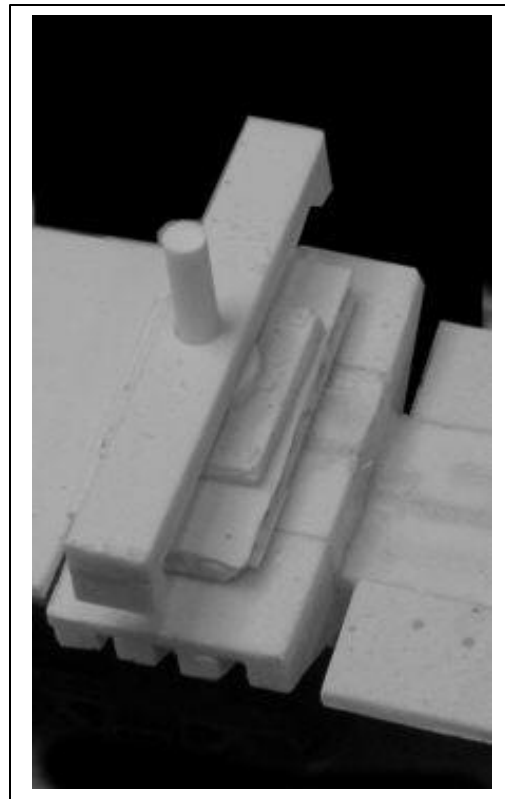
4 The sub assembled bolster should look like this.



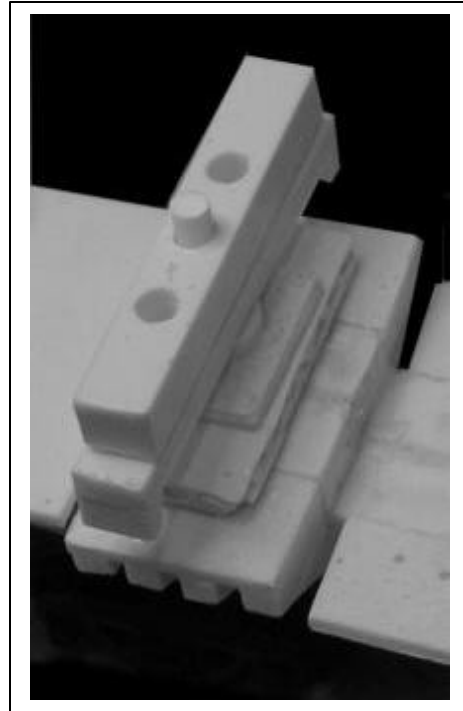
5 Add the swing pivot rod.



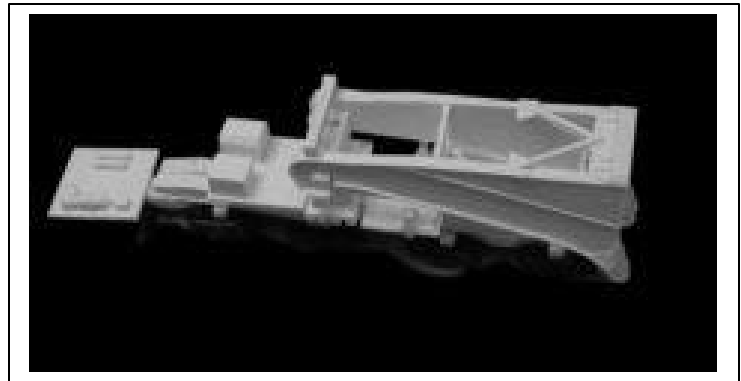
6 Add the swing down catwalk brace (21) as shown.



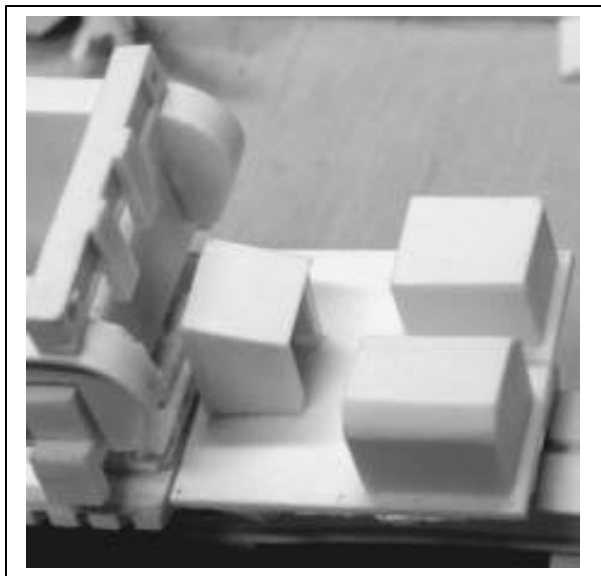
7 Add the bearing block as shown.



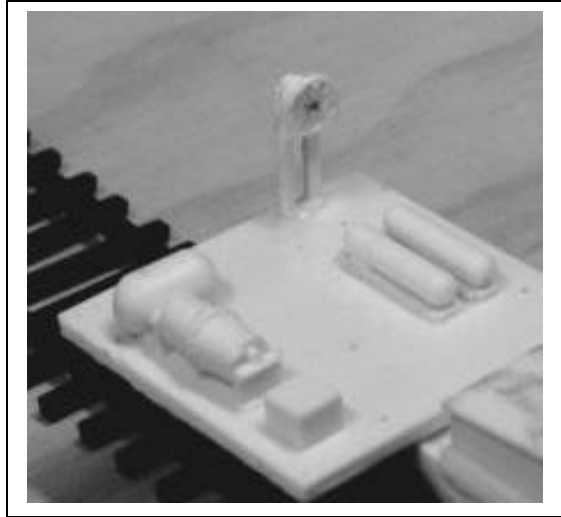
8 Fit the main girder assembly to the bolster assembly. It may be necessary to further ream the 1/8" holes.



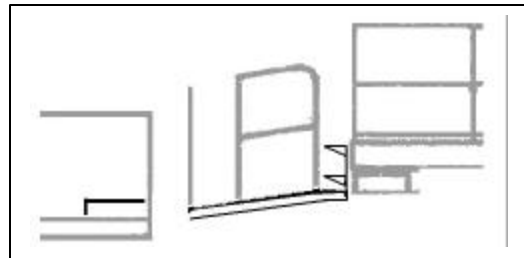
9 Add the rear bolster deck. Glue centered making sure there is clearance for the main girder to swing.



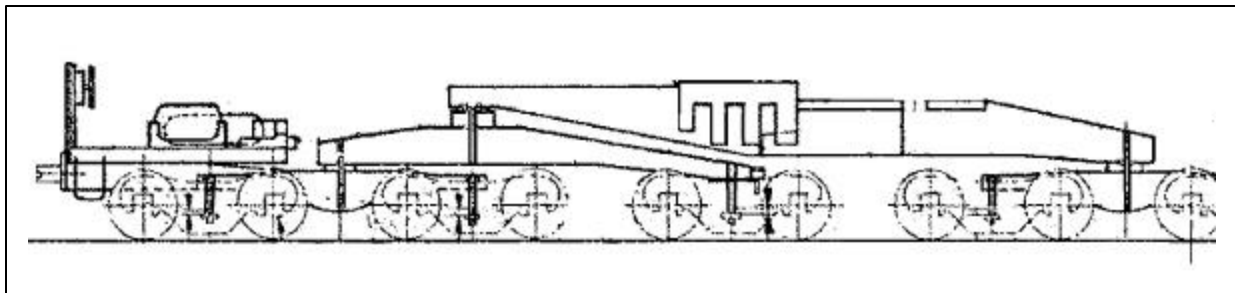
**10** Add the brake stand with the brake wheel as shown.



**11** Add the deck and steps to the bolster and deck.

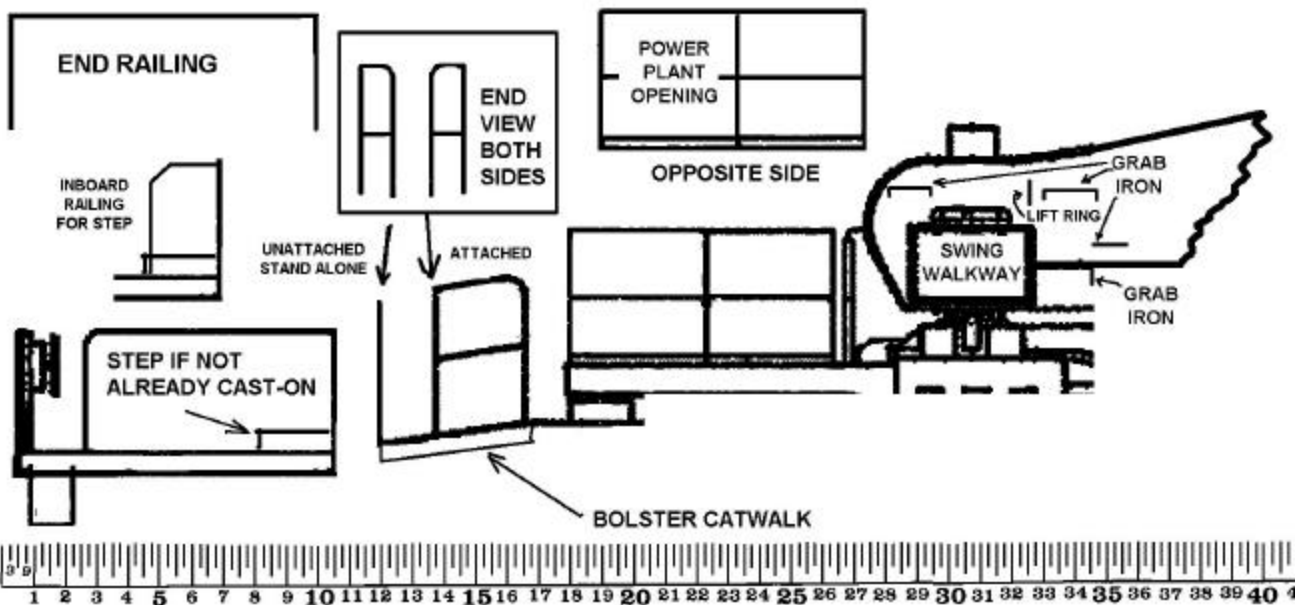


**12** Test fit the trucks to the bolsters. Trim away the edges to insure clearance. Make sure that the bolsters rest on the truck evenly and the weight of the bolsters is distributed evenly to ensure good tracking. It may be necessary to shim the trucks or elongate the clearance holes for this purpose. Make sure this is done before painting.



## Handrails

If you wish to add handrails you will need to purchase appropriate wire from your local hobby shop. The handrails appear to very sturdy on the prototype and I would suggest .020 or .025 inch music wire for their fabrication. The hand grabs should be from .015 music wire. You may have to rescale this drawing. Refer to the links on our web site for direction to prototype photos.



## PAINTING

If you followed the instructions for cleaning the parts before assembly, you are ready to paint. A primer such as Floquil's is recommended. Allow to dry overnight before proceeding with any of the color coats. For any parts to be painted a color, the color should be preceded by a coat of white since many pigments are translucent and the color of the primer has an effect – especially on very light colors. For items to be painted white - at least two coats are recommended with overnight drying in between the coats.

**Colors:**

Light Gray: 2 Parts SP Lark Gray + 1 Part Floquil Reefer White

Light Blue: 2 parts Floquil Light Blue + 1 part Floquil Reefer White

To get a good light blue for the girder assembly, the following coats one day apart are recommended:

- 1) Primer
- 2) White
- 3) Lt Blue

Overcoat entire car with Testor's Glosscoat prior to decaling. After decals have set, apply Testor's Dullcote.

## Decals Are Attached Here

### DECALING

The decals provided are a very thin film decal film. Success with these decals depends on following these instructions.

- 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.
- 3) Slide the decal directly onto the wetted surface with a small brush. Position with the brush. Remove excess water with a tissue.

NOTE: 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.

- 4) Top coat the decals with Testor's Dullcote for best results.