24914 CONRAIL 60'9" HI-CUBE

Berwick Forge and Foundry built 122 of these cars for Conrail in 1977 at their plant in Berwick, Pa. These cars were assigned to be loaded with automobile engines at the Chevrolet plant in Parma, Ohio and then shipped to assembly plants located throughout the system. These cars also feature single sheathed doors with camel locking mechanisms. The class designation of this car is B63A and they are numbered 223001 to 223122.

Tools needed to assemble this kit are: a small saw, large and small files, an Exacto knife, a small square, several grades of sandpaper, a small drill and bits #78, 75, 1/32", 50, and 3/32".

1. Unpack and inspect your kit against the parts list. Read all instructions thoroughly and familiarize yourself with the sequence of assembly. If the plastic parts are bent or warped, they may be heated until soft under a 100 watt lightbulb or a hand held hair drier (blow drier) Line the piece up with a straight edge, then flatten until cool under a heavy book. For a smooth metal-like finish, sand and seal the stripwoods. Use either a sander-sealer or an acrylic finish (Krylon) for this purpose. Sand with 00 steel wool or fine sandpaper after each coat.
2. Be sure to use a barrier coat on all plastic parts prior to assembly. This will prevent any non-compatible paints from attacking the plastic parts. Use thin layers of paint for the best finish and most detail. Do not hurry assembly. Trial fit all parts and sand to fit where necessary before applying glue.
3. Glues: When cementing styrene sides to metal, wood to styrene, or metal to wood, use epoxy (my favorite is Devcon Plastic Steel), or a contact cement (Goo). When gluing wood to wood use a white glue (Elmers'). Make certain that all plastic surfaces to be glued are free from paint.
4. Remove all flash (excess metal or plastic) from the castings with a small file or emory board. Check for any air bubbles we might have missed and repair them with epoxy or a filler compound such as Squadron Green Putty.

When drilling into plastic sides or ends use a sharp bit and light pressure.

5. Sides: Cut the brass ladder stock (see Fig. B) into four sill steps. Drill 1/32" holes into the edges of the plastic castings corners for the sill steps (see Fig.A).
6. Epoxy the end to the side of the car to form an 'L' shape. Use the small square to insure that the pieces fit at right angles to each other (see Fig. D). This is best done on a flat surface end and side upside down. After the two 'L's' are formed and cured for 24 hours they can be trial-fitted together. Check to be sure that the width of the basswood floor is correct. Epoxy the car body together (two L's only).
7. Roof: Epoxy the roof to the rest of the car body making sure that all edges are even. Any cracks in the glue joints can be filled. On the inside of the car body reinforce all joints with extra epoxy.
8. Floor: Cut to lengtn to fit into the car body making certain that both ends are square. Mark (on the floor) the centerline, the lines for the bolsters, lines for stringers, crossbearer, and crossties.
9. To build the centersill, use 1/16" x 3/16" (green) stripwood for the spacer between the side of the centersill. This wood should extend ½" over the end of the floor, and is centered on the floor. Glue the 3/16" wide side to the center of the floor. The sides of the centersill are made of the 1/16" x .200" (red) stripwood. Cut these to recess ½" from the end of the spacer and cement them to the floor against the spacer.
10. Drill holes in the centersill for the brakepipe. Refer to the underbody drawing for the approximate location of the holes.

Using the 5/32" I beams, cut eight crossbearers and and cut twenty cross ties using the 3/32" I beams. Glue the 1/16" x 1/16" (red) on to the bottom of the floor (see Fig. G) likewise mount the 1/16" I beams.

Use the #50 drill bit to make holes in ten of the crossties and in four of the crossbearers for the brake pipe.

The thick wire is used for the brakepipe. Thread the wire through the centersill holes. Bend it as is shown in the underbody drawing and cut it to fit between the bolsters.

11. Slide the crossties and crossbearers in the correct sequence on to the brakepipe. Cement the remaining crossties and crossbearers to the floor.
12. Cut the four 1/8" x .012" (orange) crossbearer tie plates 21/32" long. Cement these to the crossbearers.
13. Use the #75 drill bit to drill holes in the brake reservoir and ABD valve for inserting the emergency reservoir pipe and the auxilliary reservoir pipe. Cement the ABD valve to the crossbearer and install all the remaining brake piping, except for the reservoir pipes which will be installed in the following step.

Use the thin wire for the brake cylinder pipe, which is attached to the bottom of the crossbearer tieplates.

Epoxy the floor to the car body. Use sufficient epoxy to securely hold all edges. The floor should be cemented flush with the ends.

14. Cement a scrap of wood to the centersill to shim the end of the brake cylinder. After the glue dries, shave the shim down until the reservoir is level. Then cement the reservoir to the shim and to the bottom edge of the car side. Use the remaining thin wire for the auxilliary and emergency reservoir pipes.

Add all remaining brake piping. Install the brake levers and rods. Staples can be employed for hangers for the levers and brake rod.

15. Assemble the bolster by cutting the 5/32" x 3/16" (yellow) stripwood into bolster pads 13/32" long and glue these into place between the centersill (see Fig. G). Use the 5/64" x 1/4" (blue) to form the bottom bolster cover supports (template E). Cut four of these and mount into place. The 3/64" x .400" (black) is cut 19/32" long and is used as the four bottom bolster covers. This is assembled on to the supports. Drill a #3/32" perpendicular hole for kingpins (#4 screw) in the center of the bolster pad. Drill a #50 hole for #2 x 3/8" coupler screw through spacer and into the edge of the end.
16. Ends: Trim the tabs on the cast metal ladder so that it rests on the end corrugations and is parallel to the back side of the end. Scribe line on the styrene destination boards to simulate the border and the wooden boards (see Fig. C). Mount these as shown on both ends. Drill a #78 hole for the eyepin to support the handrail (use the thick wire) that joins the top rungs of the end ladders. On the B end of the car, glue the Miner brake housing, quick release lever (attached to brake wheel), and the Bell crank. On both ends attach the brake platform between the two end ladders.
17. Side details: Use a #77 drill bit to drill holes for the grabirons (see Fig. A). Glue these in place. Form the rods for the door with the thick green wire. Also form the small right angle between the door rods at the top of the door. Glue these to the door.
18. Painting: The body of this car is a red oxide color (5 parts Tuscan RR-25 (Floquil) and 2 parts Maroon RR-64), except for white on the ends from the roof down to the first corrugations (see Fig. C). This is to show the excess height of the car. The underframe and trucks are black.
19. Lettering: The logo and the large word CONRAIL are decals. The painted surface the decals will be applied over should have a gloss finish (use glaze in your paint). The logo has been stretched to fit over the car's ribs. It will require several applications to apply the entire logo. Cut the decals in sections close to the margins. Start with the sections that fit between the ribs; position these so that when they are dry, the decals that go over the ribs willline up correctly (see Fig. A).

The remaining lettering is dry transfers. Please take your time and be certain the lettering is square before applying it. It is best to use a burnishing tool (Exacto 1/16" ball), as pencils and pens color the backing so you can not see where the transfer is incomplete.

20. This kit is designed to use a Kadee #5 MKD coupler and rollerbearing trucks with 36" wheels. Use small washers under the truck to obtain the correct coupler height.

#24914 Conrail 60'9" High Cube Boxcar

Parts List

Qty.	Part #	Description
2	T086	60'9" Highcube sides
1	W435-8	Sill steps
2	T087	Highcube end
1	T088	60'9" flat roof
1	T089	Floor 1 17/32 x 12
1	N185	1/16 x 3/16 (green)
2	N186	1/16 x .200 (red)
1	N564	5/32 I beams
2	N562	3/32 I beams
4	N180	1/16 x 1/16 (red)
1	N560	1/16 I beams
2	T010	Thick wire
1	T009	Thin wire
1	N106	.012 x 1/8 (orange)
1	L019	Brake reservoir
1	L020	AB valve
1	L018	Brake cylinder
1	N246	5/32 x 3/16 (yellow)
1	N204	5/64 x 1/4 (blue)
4	T015	Four rung ladders
2	T005	Destination boards
2	N860	Eyepins
1	L116	Miner brake housing
1	L115	Miner brake wheel
1	L021	Bell crank
2	T085	Low brake platform
16	N851	Grabirons
1	R-3	Decals- logo
2	SP-149	Dry transfers- lettering

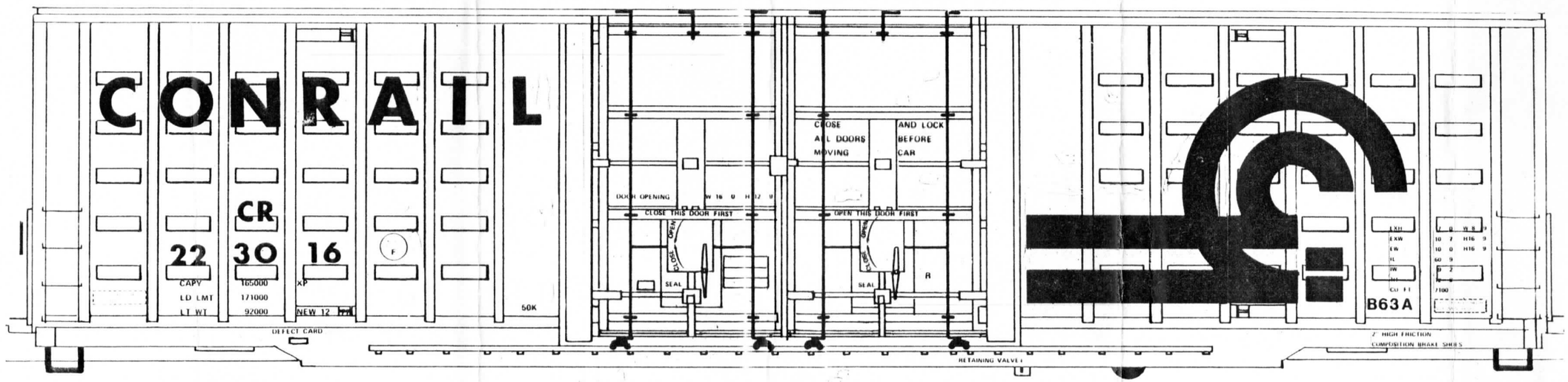

FIG A

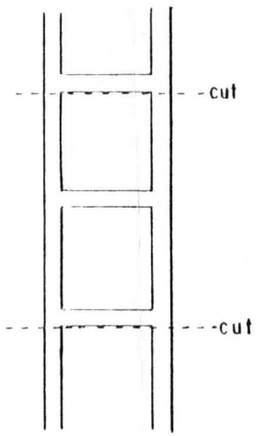

FIG. B

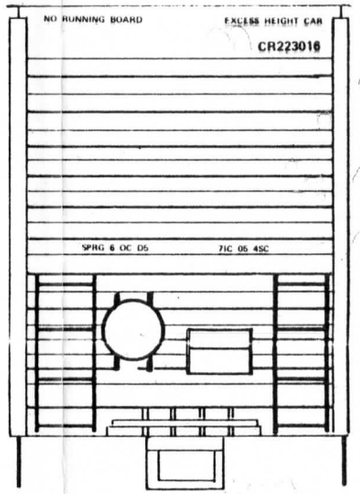

FIG C

TEMPLATE E

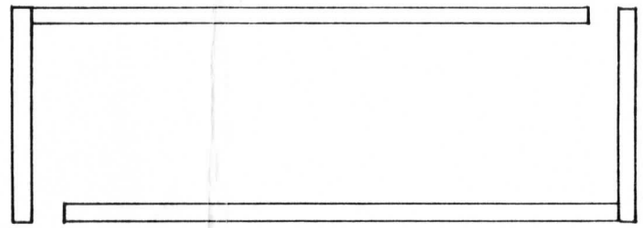

FIG D

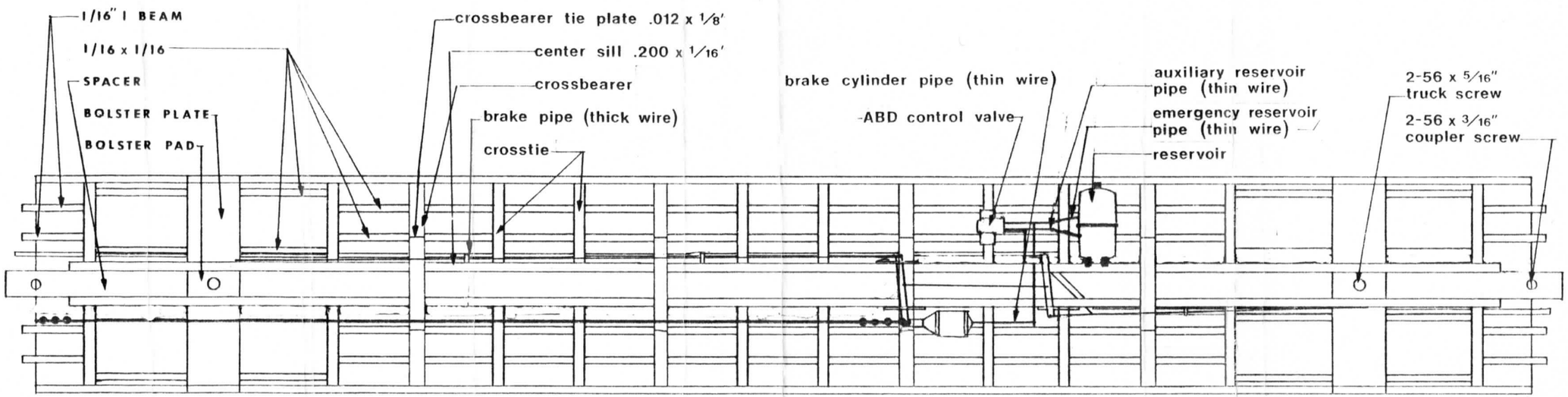

FIG G