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1958 Cu.Ft. 2-Bay Hopper

CAR HISTORY AND DECORATION

The InterMountain Railway Co. 1958 Cu. Ft. Hopper has been molded following design drawings of the American Car and Foundry Co. The prototype became a standardized design, manufactured from 1937 and well into the 1950's. The cars were rated at 70 tons, and 1958 cu. ft. capacity. In addition to those produced by ACF, hundreds of cars were manufactured by Pullman Standard and General American Transportation, to essentially the same design. As well, the CB&Q constructed copies in their own shops.

These cars were used by the majority of the American railroads all across the country; so it is likely your favorite railroad had them. There were also numerous cars leased to private companies. Reference for these cars can be found in American Car & Foundry Company, by Edward S. Kaminski; the 19th Edition of the Car Builders' Cyclopedia; and a series of articles in Railmodel Journal, March, April, August, December 1991, by Ed Hawkins.

GENERAL COMMENTS

Please read all instructions and study the drawings and parts before beginning assembly of this kit! Many of the parts are very delicate, in order for your completed model to be as attractive and authentic as possible. **DO NOT ATTEMPT TO BEND, TWIST, OR BREAK PARTS FROM THE SPRUE.** The most effective tools to use in removing parts from their sprue are an X-ACTO knife, fine clippers, or a sharp, single edge razor blade.

It is best to test fit ALL PARTS before applying glue. The locators sometimes are slightly damaged in removing them from the runner and must be trimmed before the locator holes will accept them. It may be helpful to open locator holes with a drill or reamer. We recommend a gap-filling cyanoacrylate glue for joining the parts, plastic-to-plastic, and the metal parts to the plastic. Generally very small amounts of glue are needed to affix parts, so we recommend that glue be used sparingly and applied with a small applicator.

The connecting point between the part and the "runner" to which it is attached is called a "gate". The gates have been designed to be trimmed completely flush with the part except in those cases where the part itself is used as the gate.

ASSEMBLY SEQUENCE

THE CAR BODY

Step 1. Remove any molding flash from the body. Drill through the hole in the slope sheet at the 'B' end of the body with a .025 in. dia. drill (#72). Drill through the boss for the train line, at the side of each bolster, with a .025 in. dia. drill (#72). Note that the 'B' end (brake) has two holes through the bolster, one in the center and one off-center for the brake cylinder.

The center slope sheet and center bulkhead have been assembled to the body at the factory.

Step 2. Remove any flash from the underframe. Test fit the underframe into the body; note the three pins to locate the underframe correctly between the hoppers. Test fit the diagonal corner braces at each end of the underframe, to the pin locator holes. Glue the underframe to the body. Note that the bulkhead between

the hoppers should align to the cross member in the underframe. Then glue the diagonal corner braces to the underframe; note the 'B' end diagonal corner brace has a boss locator for the air reservoir.

Step 3. Drill through the hole in the round end cap for the brake cylinder with a .016 in. dia. drill (#78), and attach the round end cap to the brake cylinder. Then attach the brake cylinder to the bolster at the 'B' end of the car. The pin of the brake cylinder is inserted into the hole on the bolster, and the support for the lever is inserted into the hole in the slope sheet. See FIGURE 1.

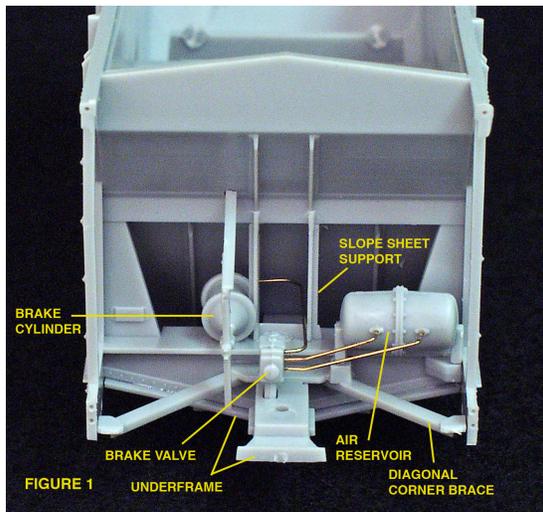
Step 4. Drill through the hole in the air reservoir bracket with a .025 in. dia. drill (#72). Attach the air reservoir bracket to the locator holes in the bolster at the 'B' end of the body, next to the side sill.

Step 5. Attach the slope sheet supports above each bolster. Note the 'B' end slope sheet support has a curved edge to clear the air cylinder. The slope sheet support has a round boss that fits into the hole in the center of the bolster, and the opposite ends rest against the hopper slope sheet. See FIGURE 1.

Step 6. Attach the air reservoir to the locator holes in the bracket and the diagonal corner brace. Note the locator holes are different size, and the two holes in the air cylinder locate toward the end of the car. See FIGURE 1

Step 7. Attach the brake valve in the locator slot in the underframe. The holes in the brake valve are oriented toward the air reservoir.

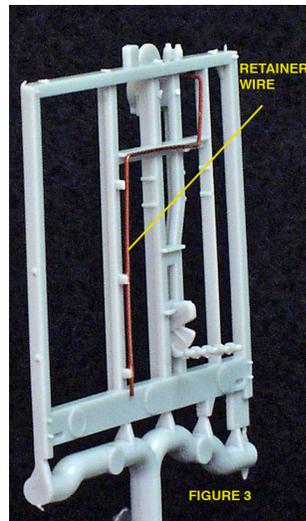
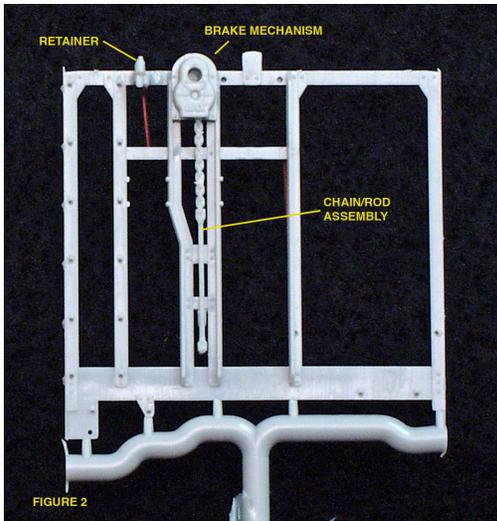
Step 8. Attach the wire lines from the brake valve to the brake cylinder and to the air reservoir.



Step 9. Remove any flash from the end frames. Test fit the end frames to the body. Note the end frame for the 'B' end has the paired vertical members to support the brake platform. The end frame has locator slots to receive the ends of the diagonal corner braces.

Step 10. Attach the retainer valve to the 'B' end frame. The hole in the retainer valve is oriented down. Then attach the wire line into the retainer valve and to the locating pins on the inside surface of the 'B' end frame. See FIGURE 2 and FIGURE 3.

Step 11. Attach the brake mechanism to the 'B' end frame. Then attach the brake chain/rod assembly to the 'B' end frame. The chain end is attached to the brake mechanism, and the hooked end is inserted through the end frame, to fit onto the flat locator on the inside surface of the 'B' end frame.



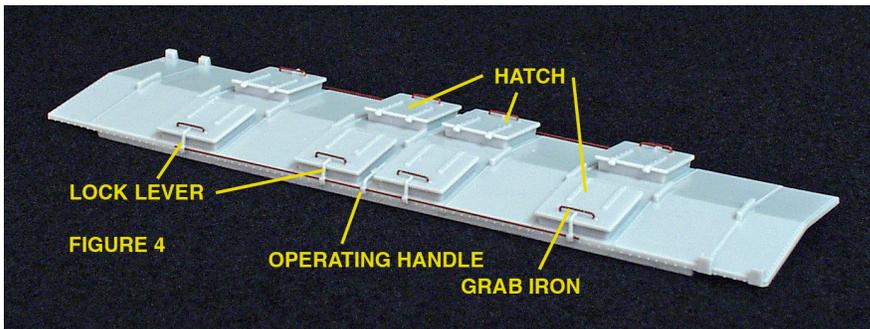
Step 12. Attach the end frames. The diagonal corner braces fit into the slots in the end frame. For the 'B' end frame, the lower brake chain fits into the fork at the end of the brake cylinder, and the support for the brake lever rests against the inside surface of the end frame.

Step 13. Carefully drill through the holes for the wire grab irons with a .016 in. dia. drill (#78), and attach the wire grab irons. The drop bend of the grab irons for the end is more than that of the grab irons for the side.

ROOF

Step 14. Remove any flash from the roof and test fit it into the body.

Step 15. Attach the 8 roof hatches to the roof in the square locator holes, with the hinges of the hatches toward the center of the car. See FIGURE 4.



Step 16. Drill through the holes in the rounded end of the lock levers and operating handles with a .016 in. dia. drill (#78). Attach one lock lever to each hatch in the locator holes provided. The rounded end should be positioned close to the roof.

Step 17. Attach one operating handle to the roof at the square boss between the center hatches on each side.

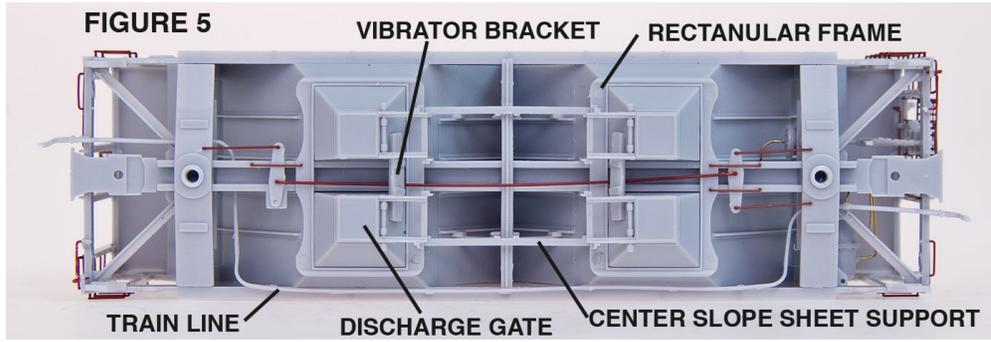
Step 18. Thread the wire through the rounded ends of the levers and handles, and glue in place.

Step 19. Attach the grab iron to each of the hatches.

Step 20. Attach the desired weight to the inside of the body. Then attach the roof to the body.

UNDER BODY DETAILS

Step 21. Drill through the holes in the rectangular frames that surround each pair of hoppers with a .016 in. dia. drill (#78). Attach the rectangular frame around each pair of hoppers. Note that the two angle shaped locators are oriented away from the underframe, and the part with the two small holes should be attached at the 'B' end of the car. See FIGURE 5.



Step 22. Remove any flash from the center slope sheet supports and attach them to wrap around the cross member of the underframe, and against the locator lugs on the center slope sheets and the rectangular frames. Note that the angle shape of the supports are oriented toward the side of the car.

Step 23. Attach the vibrator bracket to each pair of hoppers, in the rectangular locators. The bracket is oriented with the chanel edges in the locators and the off-set is away from the underframe.

Step 24. Remove any flash from the hopper discharge gates. Test fit each gate to the locating holes at the bottom of each hopper. Note that the shorter angular leg fits into the angle shaped locator in the rectangular frame. The longer angular leg locates to the side of the underframe.

Step 25. Attach the train line to the locating pins along the right side sill of the body. Note the train line is positioned in the holes in each bolster.

Step 26. Attach one of the brake beams to the pad at the 'A' end of the underframe.

Step 27. Attach the wire brake rods to the under body details. The other brake beam is suspended by the brake rods.

FINAL ASSEMBLY

Step 28. The car has been designed to accept the Kadee® #78 coupler. The coupler, spring, and bottom of the coupler box are attached to the underframe with the screw.

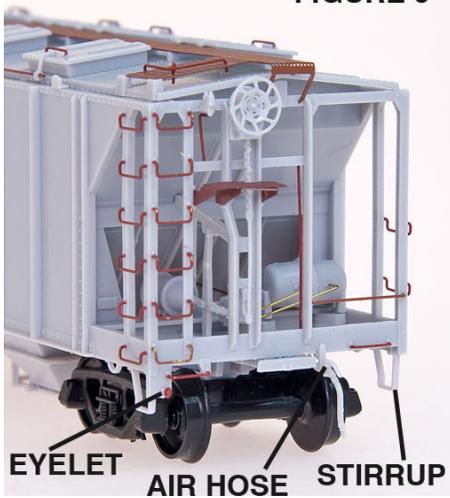
Step 29. Insert the wheelsets into the trucks, and attach the trucks to the car with the screws provided.

Step 30. Attach the stirrups to each corner of the sill. See FIGURE 6.

Step 31. Attach the air hose to each end of the car located in the boss on the bolster. Drill a .020 in. dia. (#76) hole in each end frame to accept the locator pin molded into the air hose. Note the air hose for the 'B' end has a 'T' fitting for the wire air line connection to the brake valve.

Step 32. Attach the coupler lift levers. The eyelet is attached in the locator hole under the end ladder, and the lift lever is glued between the eyelet and the bottom of the coupler box.

FIGURE 6



Step 33. Bend the end brackets of the etched metal roof walk down to fit the locating holes in the end frames. Then attach the roof walk to the roof. Then attach the roof walk grab irons. See FIGURE 7.

Step 34. Attach the etched metal brake platform and platform support bracket to the 'B' end frame.

Step 35. Attach the brake wheel.

Step 36. Attach the foot guards to the top of the sides of the car. These have been molded individually. Refer to the prototype car that is being modeled for the number of foot guards to be added. There were as many as 8 or as few as none on each side of a car.



FIGURE 7