

## #4012 22 foot WOOD ORE CAR in HO Standard Gauge!

### PROTOTYPE HISTORY

A Classic of American Railroading, this heavy duty "Great Lakes" Ore Car captures the look so familiar to modelers of Eastern and Western mining. It is ideal for ore transport, in coal service, or in narrow/standard gauge interchange. And a ten car train is only 33" long — perfect for short sidings, tight radius and complicated switching operations.

This kit is typical of the all wood 100,000 pound capacity 22' cars built by the Chicago, Milwaukee and Saint Paul Railway between 1900 and 1915.

This car is typical of those used by many railroads throughout the United States and Canada and represents standard construction practices of the period.

### PLEASE READ BEFORE ASSEMBLY

As the parts are small, carefully clean your workspace, and do the actual construction over a piece of white typing paper, with adequate lighting.

Use only liquid cement for plastic. Apply cement with a pointed #00 or #000 brush. Apply cement sparingly, as capillary action will draw cement into the joint. Allow cement to set several seconds before moving on to the next step.

Each "sprue" or group of parts has a letter, and each part a number, as in "B-3."

Remove parts from the sprue, ONLY with a sharp modelers' knife, when required in assembly. Mark off each step when completed. When trimming parts off, be sure not to let them "snap" off and into the carpet! DO NOT TWIST THEM OFF.

If you think a part does not fit, STOP, you have made a mistake. All of the parts DO fit. Study the drawing carefully, and test fit each part to see where the cement should be applied.

Plastic parts have a sharp "witness" line, usually on the thin edge. This is a "parting line" where the mold halves come together. This should not be confused with "flash" which is a large area of very thin plastic extending from the parting line. We try not to ship parts that have "flushed," as they are thicker than designed and may not fit. For a finer appearance, this fine line can be easily removed by scraping with a modelers' knife.

To avoid ejector pin marks on visible surfaces, several parts have "sucker" pins. These are round "dots" attached to the edge of the parts C-1, C-2, C-3. CAREFULLY REMOVE THESE BEFORE ASSEMBLY.

If a part does break during removal or assembly, apply a small amount of cement and set aside to dry.

### PAINTING

We're starting with painting instructions because there are several options, and you should decide before assembly which you want to use.

We strongly suggest spray painting the model with an air brush. This is not difficult, and if you have not done it before, now is a good time to start. Your hobby dealer can recommend good inexpensive air brushes. It is an easy technique to master and well worth the effort.

As these are "wood" cars, we have added a very fine "wood grain" to the plastic parts. This almost disappears when painted, as it should. The wood grain barely shows on painted prototype cars.

The interior sidewalls and slope sheet should be a weathered wood color. The exterior surfaces should be TUSCAN or BOXCAR RED. The iron work can be body color or black. Trucks are black.

If you plan to use decals, the sides should be glossy. After applying decals, lightly spray dull coat or clear flat over the entire car. Lettering is usually limited to initials and numbers.

### NOTE TO BOTH OPTION 1 AND OPTION 2

The truss rods are pre-blackened. This is excellent primer for paint, or may be left unpainted. If you don't wish to paint them, DO NOT cement body bolsters C-5 in place until after painting and assembly. Instead, snap them and coupler pocket covers C-4 in place to mask off gluing surfaces, and remove after painting for final assembly.

### OPTION ONE

Pre-paint and weather interior surfaces BEFORE ASSEMBLY. After paint has dried, scrape paint from surfaces to be cemented.

(1) Spray Floquil "foundation" lightly on inside of slope sheet and sides. Let dry overnight.

(2) Using a sharp knife or needle, gently scrape "wood grain" thru the foundation color to the black plastic. Don't overdo it, just indicate grain.

(3) Flow diluted Floquil Driftwood and Oak Flo-stains onto each board, varying the colors and intensity. Allow to dry thoroughly.

(4) Pre-paint cross braces C-6 as in steps 1 thru 3. Set aside.

(5) Pre-paint winding rod assembly B-5 Rusty Brown. Set aside.

(6) Proceed with assembly. When completed, mask off interior surfaces and spray exterior in your choice of color.

### OPTION TWO

Assemble the kit and paint it! For added effect, you can spray the car interior a weathered gray brown, including the top edges of the car. When dry, mask off and paint the exterior.

### A NOTE ABOUT WEIGHT

The finished car with Kadee couplers weighs just over one-half ounce. NMRA recommended practice suggests this car should weigh approximately 2½ ounces. We have not provided a weight with this car for several reasons; (1) No place to hide one; (2) In testing, the car rolls very well with our trucks, and being "bottom heavy," is therefore, quite stable. Also the usage of this car will vary from layout to layout. We suggest that if you have steep grades and small locomotives, you should test these cars first in the strings you plan to use before adding weight. Weighting this car is quite simple — just put a little loose rock "ore" in the bottom of the hopper. Also, a suggestion regarding a load. Shape a piece of foam rubber to fit car, contour top and cement on a thin layer of ore or coal. This will keep the car from becoming too heavy, and is easily removable.

So lets proceed with assembly . . . . .

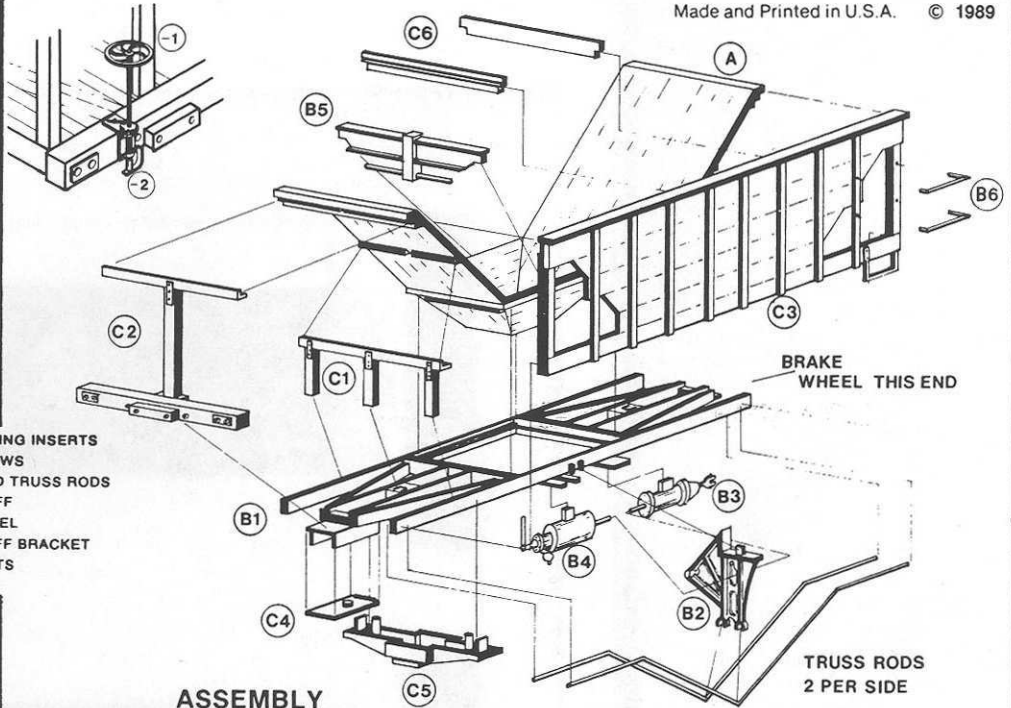
Sharp pointed modelers knife  
 Fine pointed tweezers  
 #00 or #000 brush to apply cement  
 Liquid cement for styrene plastic  
 Small flat medium cut file  
 Paint (styrene compatible, we recommend airbrush application.)  
 Couplers: Kadee #5 or NMRA hook (Athearn)  
 Decals

**TOOLS NEEDED**

- 4012-A SLOPE SHEET
- B-1 UNDERFRAME
- B-2 KING POST
- B-3 BRAKE CYLINDER
- B-4 AIR RESERVOIR
- B-5 WINDING ROD
- B-6 GRAB IRONS
- C-1 INTERMEDIATE SUPPORT
- C-2 END BEAM/SUPPORT
- C-3 SIDE
- C-4 COUPLER POCKET COVER
- C-5 BODY BOLSTER
- C-6 CARBODY CROSS BRACE
- 3002-1 TRUCK SIDEFRAAME
- 2 JOURNAL LIDS
- 3 TRUCK BOLSTER
- 4 BRAKE SHOES
- 5 SPRINGPLANK

**PARTS LIST**

- WHITE CONE BEARING INSERTS
- 4-2/56 SCREWS
- PREFORMED TRUSS RODS
- BRAKE STAFF
- 3003-1 BRAKE WHEEL
- 3003-2 BRAKE STAFF BRACKET
- 4 WHEELSETS

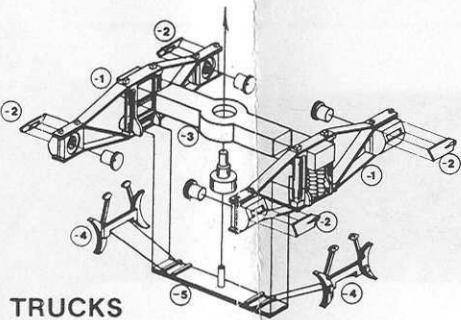


**ASSEMBLY**

Please follow these step by step, as some parts **MUST** be installed before others. Don't try to outguess us until you have built one!

- (1) Clean "Gate" off slope sheet side, and LIGHTLY draw file sides of slope sheet or draw over a fine (400) sandpaper to clean to clean up edges. Cement slope sheet to B-1.
- (2) Cement C-1 to each end; ridges will locate parts.
- (3) Cement C-2 to each end.
- (4) Test fit and cement sides, C-3 in place. Apply several passes of the cement brush on slope sheet sides. Line up sides to ends on the top edge, and check assembly by placing car upside down on a flat surface.
- (5) Cement kingpost B-2 in place on each side. Make sure they are square.
- (6) Cement B-3 and B-4 in place exactly as shown. Air lines will almost meet in center of kingpost B-2.
- (7) Cement B-5 in place inside car. Small tabs on car sides are for alignment.
- (8) Cement brake staff into brake staff bracket, and cement brake wheel to staff with liquid cement or ACC. Set aside.

- (9) Install truss rods as shown. Free ends insert into "pockets" molded in end beams.
- (10) Cement body bolsters C-5 in place. Tabs will hold truss rods in proper location.
- (11) Install couplers (Kadee #5, or NMRA) retain with coupler pocket cover C-4.
- (12) Cement brake wheel assembly just to the left of the buffer beam, on the end that the brake cylinder clevis points to.
- (13) Snap in C-6 cross braces. The little "rod" molded on one edge should face ends. Don't cement, as you may want to remove them to add a load.
- (14) Cement grabirons B-6 (4 required, extras provided) 2 on each side.
- (15) Install trucks using 2/56 screws into hole on body holster. NOTE: scrape off any paint on the pivot surfaces first.



**TRUCKS**

- (1) Carefully trim white nylon bearings from sprue. Firmly press into holes in journal boxes of sideframes -1 until bearing bottoms into hole.
- (2) Cement two -2 to each -1.
- (3) Cement sideframes to bolster -3 make sure springs are down and bolster is as shown. Make sure assembly is square, and set aside.
- (4) Cement two -4 to each springplank -5. Set aside. NOTE: Trucks will be finished after painting, but final assembly is shown here for convenience.
- (5) Carefully insert wheelsets. Place truck kingpin in bolster, and "snap" DO NOT CEMENT springplank assembly in place.

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