



Western Pacific Railroad Maintenance-of-Way Cars Modeling WPMW 0209

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Celebrating 100 Years of
the Feather River Route



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Pacific Railroad.



WP 2023 CONVENTION SACRAMENTO CA

Modeling a Maintenance-of-Way WPMW 0209

Photos by the author, unless otherwise noted.

Maintenance-of-Way Cars

- Cars that have outlived their revenue service days and are reused by the railroads to keep cost down.
- Older freight cars are adapted to the MOW fleet:
 - Older tank car -> water or fuel car
 - Former coal car -> ballast car
 - Flat Car -> combination flat-gondola

MOW Cars are interesting to me...

- I started to research WP maintenance-of-way equipment in 2018.
- This led me to modeling a group of WP MOW cars.
- This is the fourth model in my series.
- I plan to model more WP MOW cars.
- I hope to share more of my models.

A Unique Boxcar...

- An interesting 40 foot boxcar that the Western Pacific had in their freight car fleet, was a 40 foot Milwaukee Road ribbed side car.
- Specific shipper required a special car in 1962.
- WP had nothing in its fleet that was appropriate.
- WP found suitable cars available on the Milwaukee Road.
 - WP purchased two of these cars from the Milwaukee Road.
 - The two cars were built at the West Milwaukee Wisconsin shops in 1948-49.

WP 3417 was born...

- At least one of these cars was later transferred to MOW service.
 - The original Milwaukee # 27199 became WP boxcar #3417.
 - Then it became WPMW 8696.
 - And then later renumbered to WPMW 0209.
 - WPMW 0209 had a diesel generator mounted inside the car to provide electricity for maintenance of way crews.
 - This is why there are side vents in the car.
- WP 3417 boxcar now resides at the Western Pacific Railroad Museum in Portola California.



WP 3417 at Western Pacific Railroad Museum

In the Beginning ...



- I started with the Roundhouse (MDC) 40 foot, Horizontal Rib box car kit # 1025.
- I had a few of these cars kits on hand.
- This kit had been retired and the only way to find them is on eBay or in a hobby shop that may have some old stock.

Finding Information ...

- Western Pacific Headlight magazine issue # 8 had an article on this car by Peter Arnold.
- Mainline Modeler magazine, September 1988 had a drawing of this type of Milwaukee car along with a an article on the cars by Kirk Reddie. There was a previous article in the June 1988 issue of the Milwaukee Ribbed Side boxcar 40', 50' and Express cars by Kirk Reddie.

Finding Information – Cont.

- There is another article of these cars in the Jan-Feb 1977 Northwestern Prototype Modeler magazine by R.H. Hendrickson
- Some of the Mainline Modeler and Northwestern Prototype Modeler magazines can still be found on eBay.
- Western Pacific Headlight magazines can be found on the WPLives.org website

From Western Pacific *Headlight* # 8 ...

modeling the

Western Pacific

ex-milwaukee road boxcars

By Peter Arnold



From Northwestern Prototype Modeler Jan/Feb 1977 Issue ...

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NORTHWESTERN PROTOTYPE MODELER



Milwaukee Road Ribbed Side Box

by R.H. Hendrickson

During the 1930s, the Milwaukee Road pioneered the use of welding in freight car construction, developing a number of cars especially designed for this method of construction. Among these were a series of distinctive box and auto cars whose sides were stiffened by external, U-section ribs running lengthwise from end to end of the car. At a time when most other railroads were acquiring box cars of standard AAR design, the Milwaukee was enlarging its box car inventory with several thousand of these horizontally ribbed, all-steel cars which were constructed in its own shops between the late 1930s and late 1940s. Many of these cars, variously modified and modernized, are still in service.

An HO scale model of the Milwaukee's 40' horizontally ribbed box car is available in Model Die Casting's "Roundhouse" line, lettered either with the "Olympian" slogan (kit 1021) or the "Hiawatha" slogan (kit 1022). There are a number of dis-

crepancies between this model and the prototype, but these can be largely corrected to produce a reasonably convincing replica.

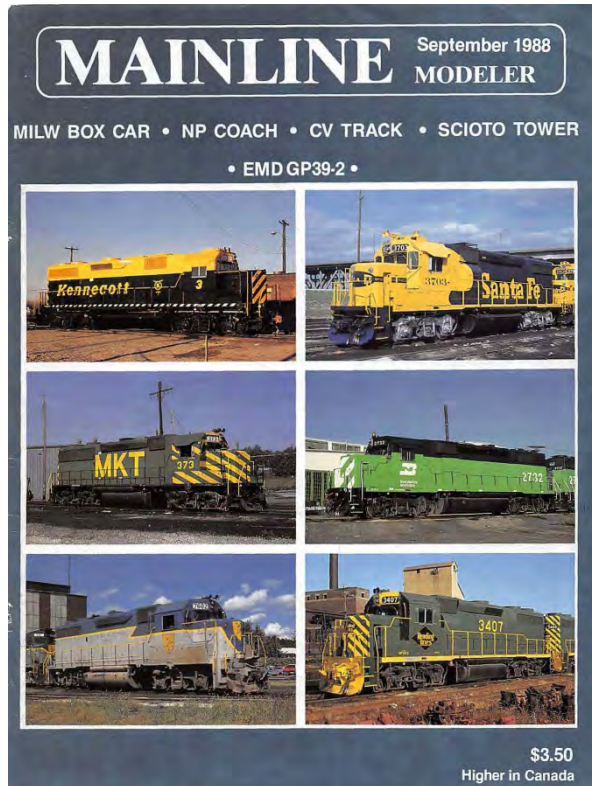
The prototype cars were built in three slightly different forms. The first series of cars, built in the late 1930s and numbered 18000-21187, had the side ribs extending to the extreme ends and used double panel steel roofs. During the World War II period, the design was altered to provide 4" of additional interior width and 3" of extra height, and the more common single panel steel roof was adopted. On these cars, numbered 21188-23937, the side ribs ended about 3' from either end of the car, allowing ladders and grab irons to fit closer to the car sides and thus conform to clearance requirements in spite of the increased width. Both the first and second series horizontally ribbed cars had dreadnaught steel ends, wood roof walks, and small end doors located high on the "A" end of the car to permit

the loading of long timbers and bulk grain. The third, post-World-War-II version of the horizontally ribbed design was similar to the second except that ends of improved dreadnaught design were adopted, the small end door was deleted, and roof walks were of steel instead of wood. These cars were numbered in the series 23938-28558.

THE MODEL

Model Die Casting's HO kit comes closest to representing a car of the second type, built in the early to mid 1940s. However, it lacks the small end door on the "A" end, its doors are incorrect, and its lettering leaves a lot to be desired both in clarity and prototype accuracy. Fortunately, the end door is easily added, the kit doors can be changed, and the model can be re-lettered with Champ's decal set HB-127, which faithfully reproduces the lettering of car number 21329, built in

From MAINLINE MODELER September 1988...

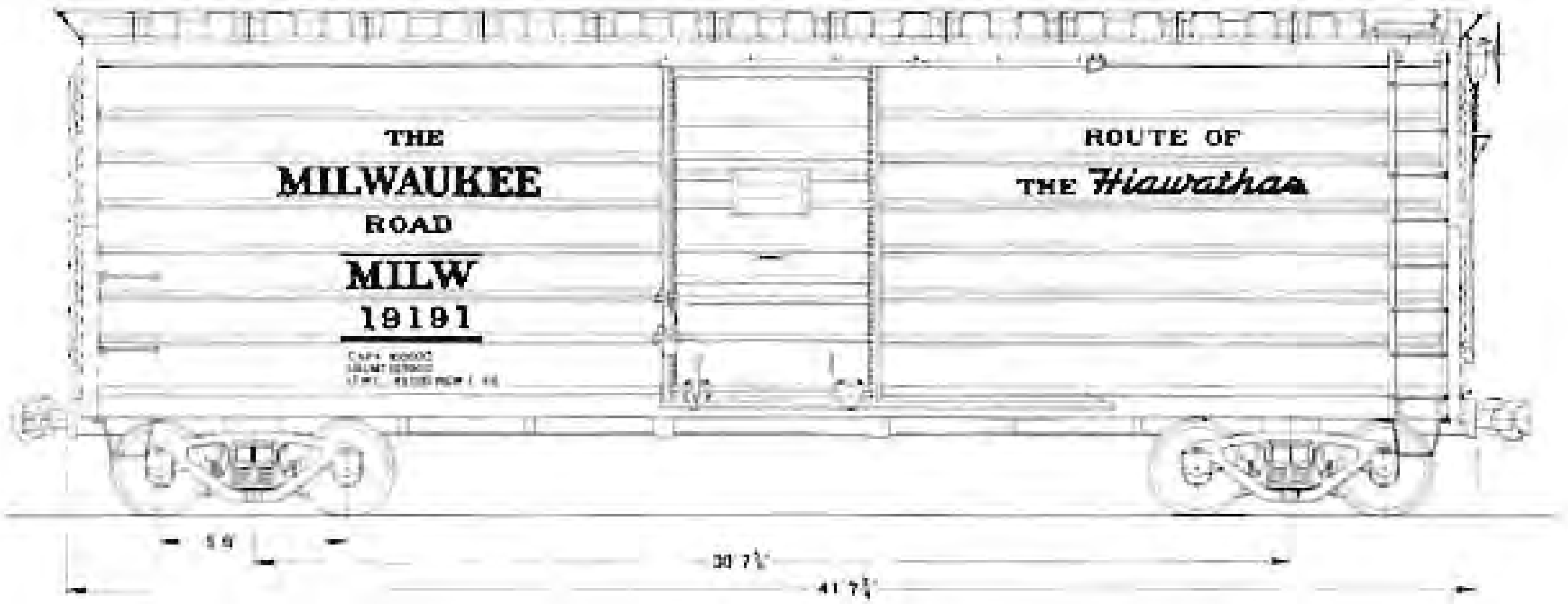


MILW BOX CAR Part II
Second Version 40-ft. Car
By Kirk Reddie page 36



Photos by John Ryczkowski

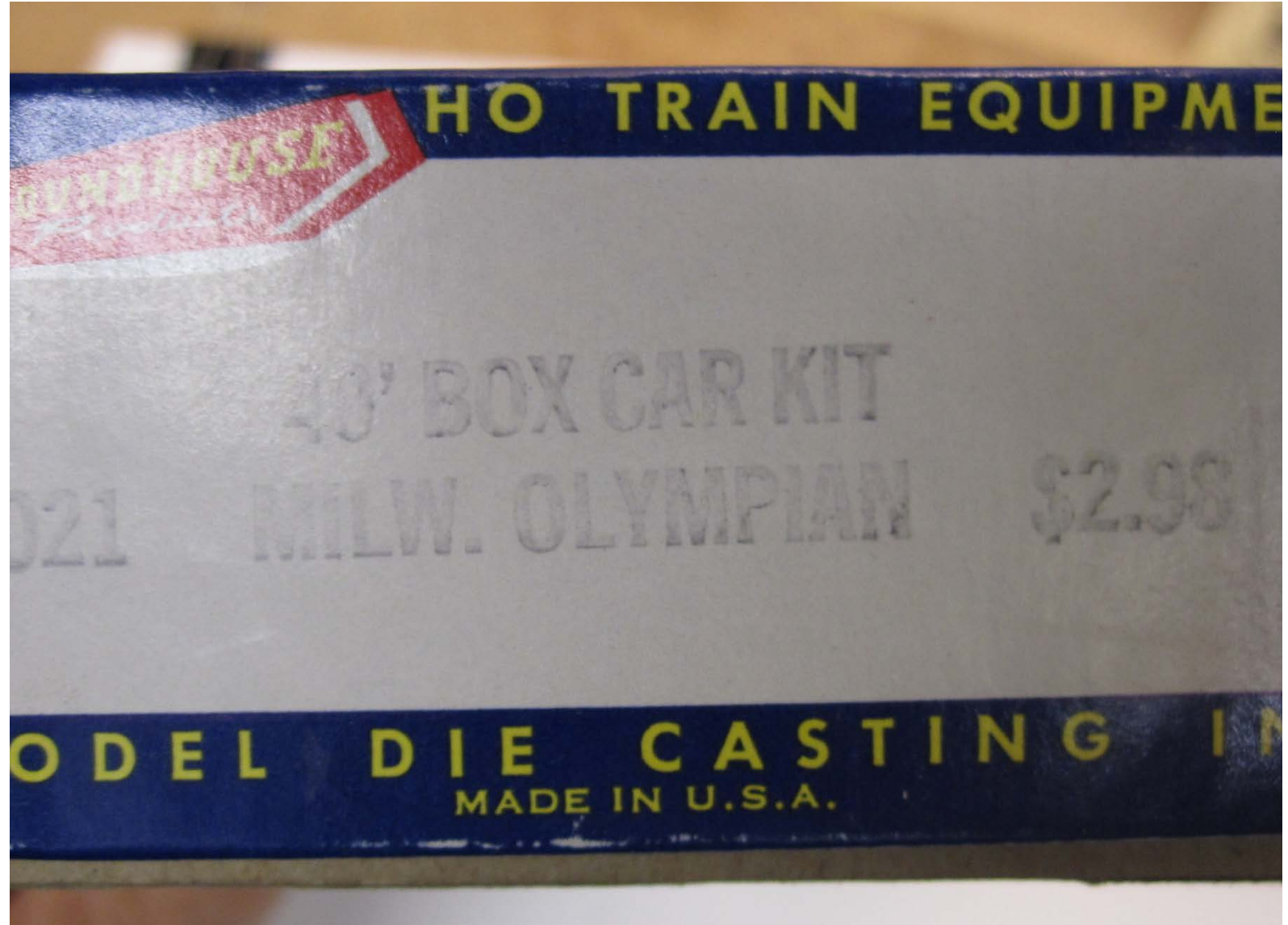
Milwaukee 40 foot Ribbed Side Boxcar drawing





**Roundhouse model # 1025
Unmodified built out of the box**

- I used the Roundhouse #1021 for one of the models
- Milwaukee Olympian 40' boxcar kit





Roundhouse model # 1021
In the box

And then there were three ...

When I started this project I decided to model three models of the 40 foot ribbed side boxcar

- Western Pacific # 3417
- Western Pacific Maintenance-of-Way # WPMW 8696
- Western Pacific Maintenance-of-Way # WPMW 0209

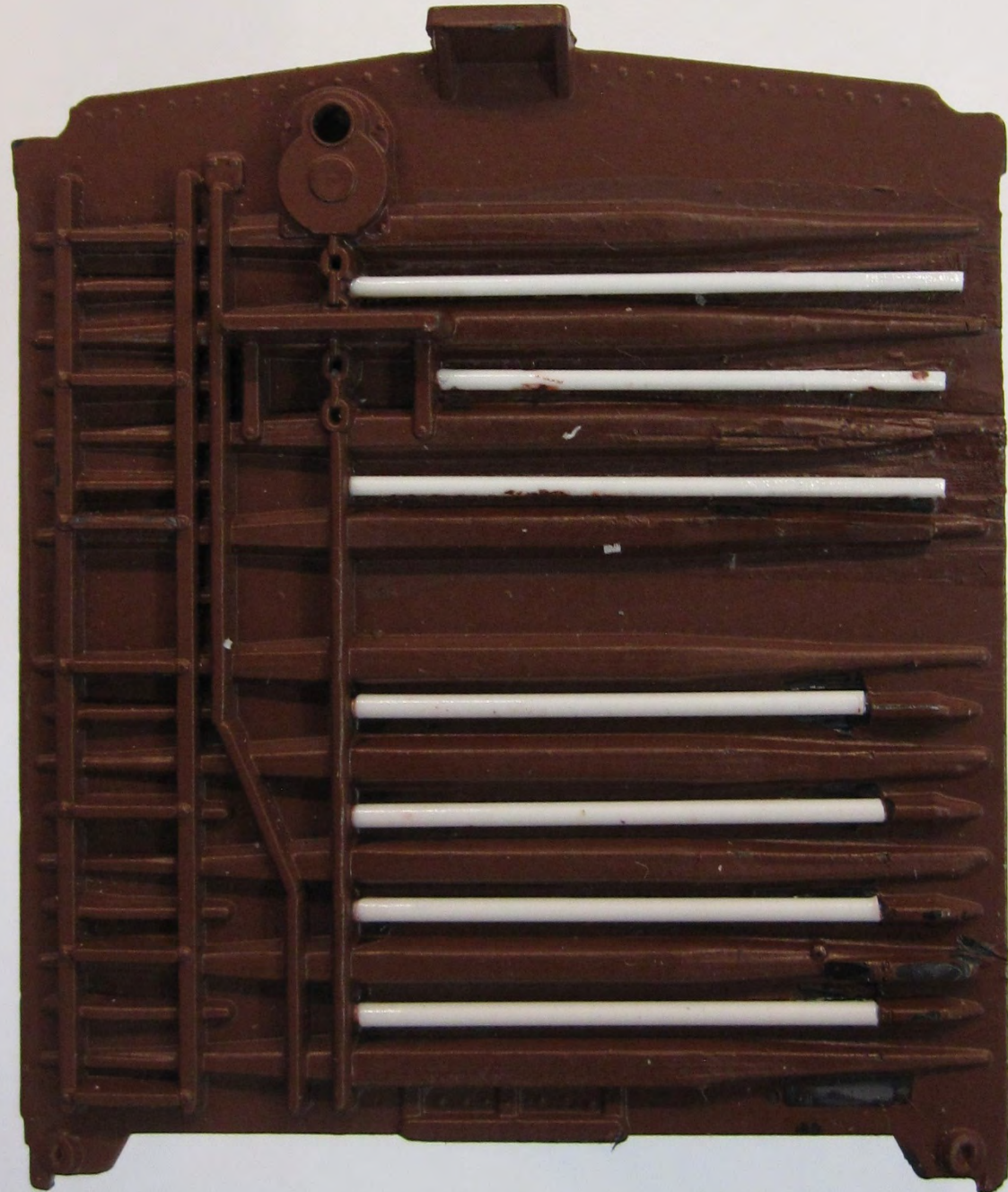


Removing the cast on ladders and grab irons

- Starting to modify the end of the car



- Adding ribs to look like the original box car



- Modified car end after painting (first coat)





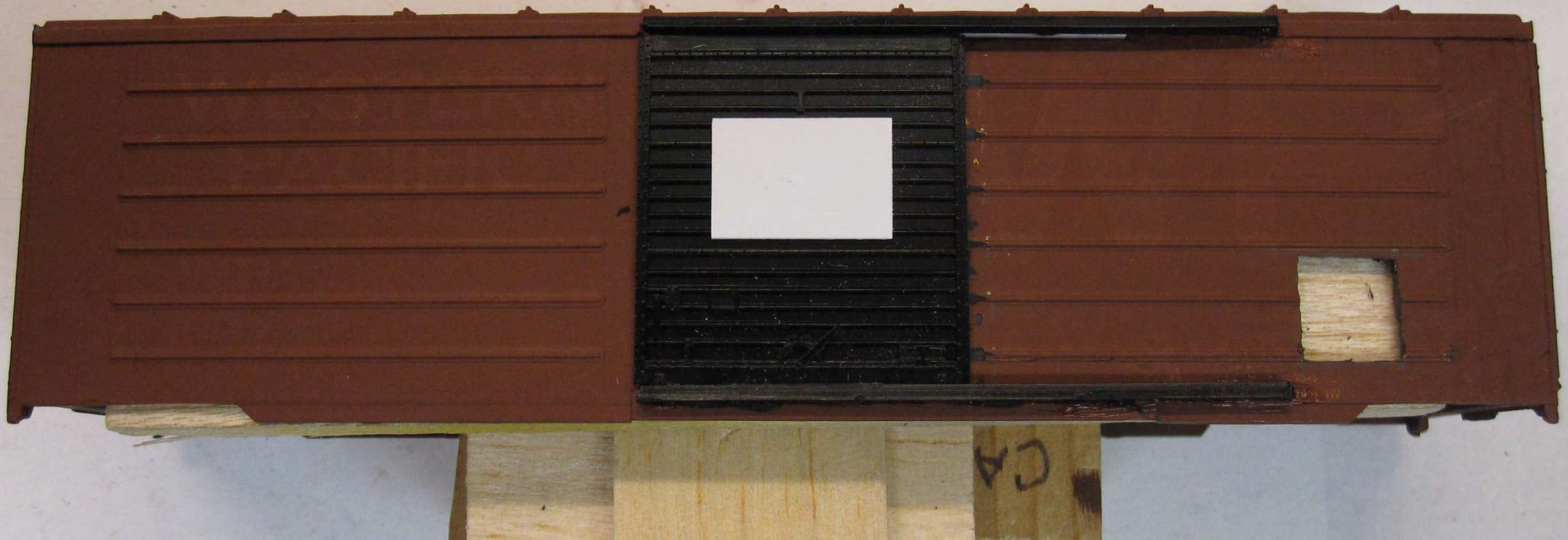
Adding new door and door track
Details West Part DG-181 door and track

Using several of the on-hand kits ...

- Using three different on-hand kits for each of the three models
- Working on them in different stages
- As seen in the following slides



Cutting in new vent openings
Side one



Cutting in new vent openings
Side two



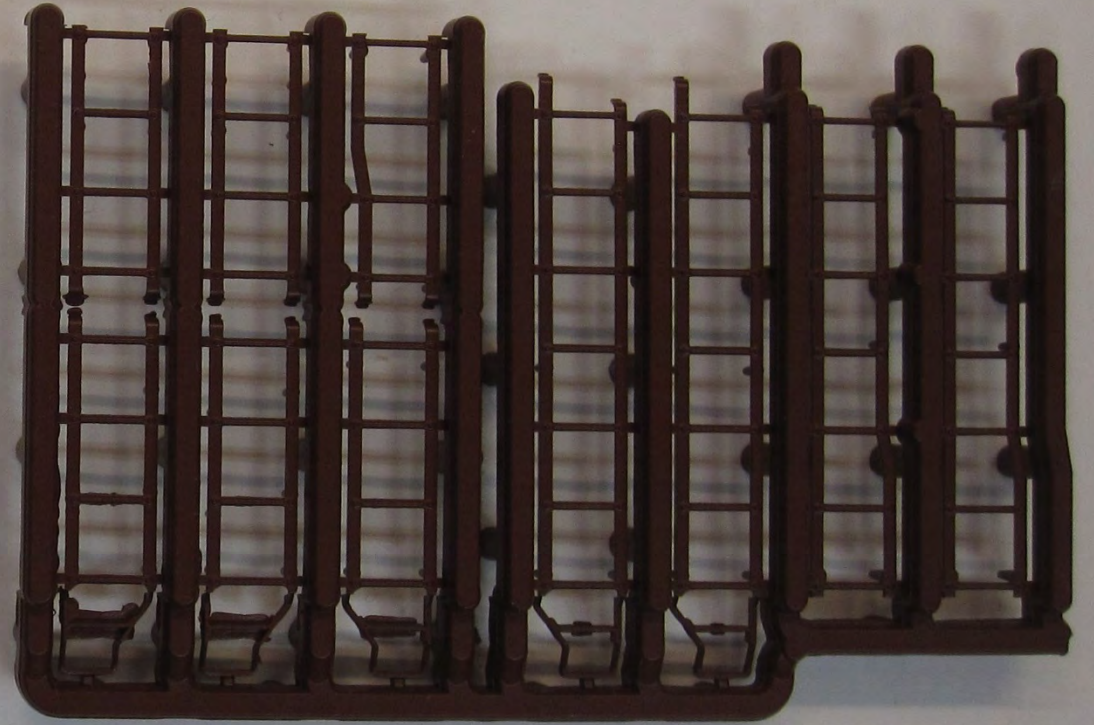
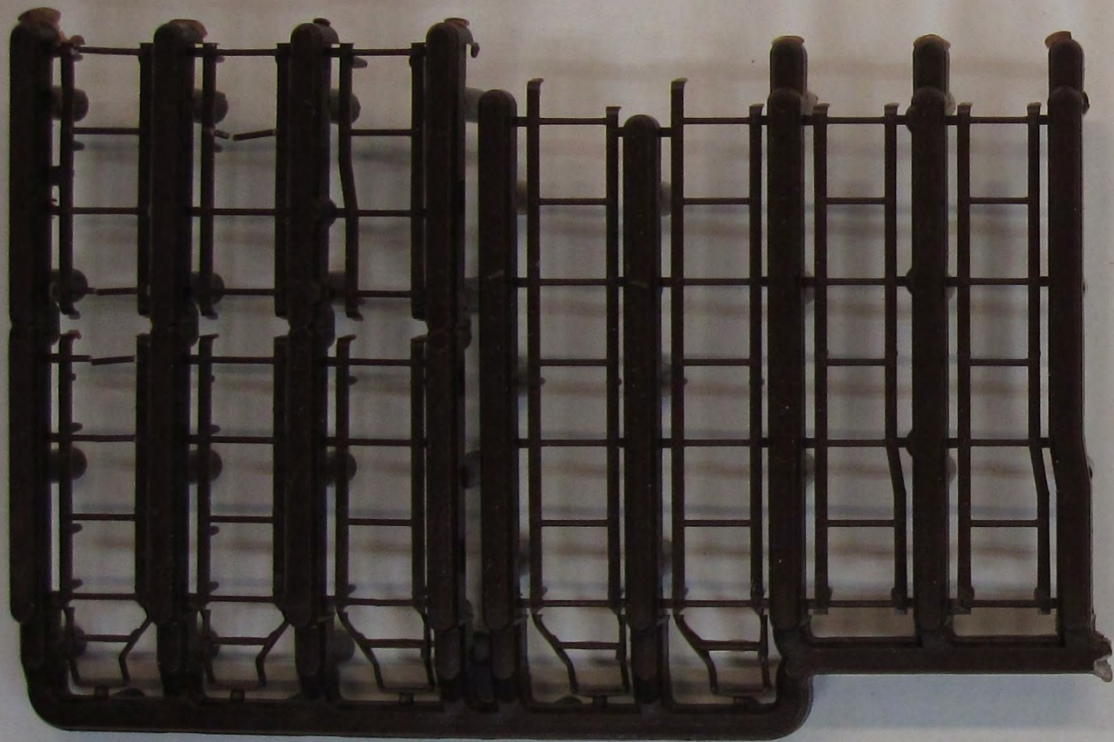
Adding screens – installing large plate for door lettering.
Side one



Adding screen – installing large plate for door lettering.
Side two

- Brass Screen for vents
- Scrap Styrene for Rain Shields over Vents





New ladders from scrap box

- New Grabirons



- Boxcar door details
For the tack boards





A-Line Stirrup Steps



Truck box for trucks

- Moving to the underframe of the car
- I used Kadee # 58 scale couplers in the original coupler pockets



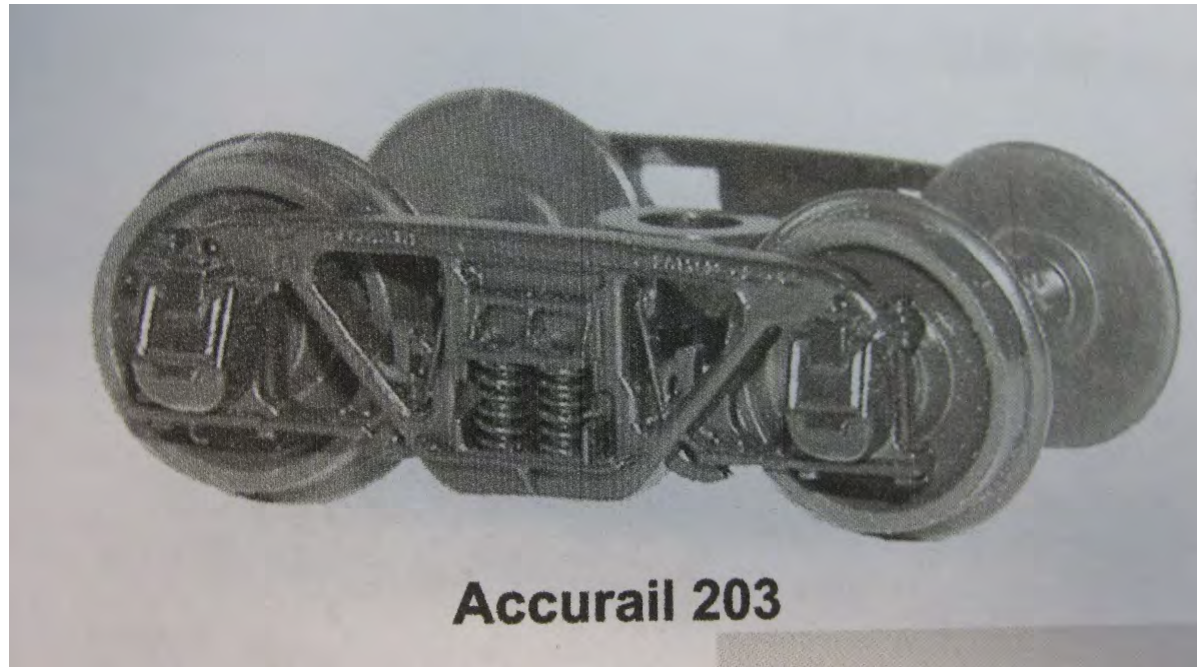
- Kadee # 520 33" Freight Metal Wheels



Changing the kit supplied trucks to the Andrew trucks.

I found a very good article on Freight Car Trucks by Richard Hendricks
April 1, 2014. You can find this updated article at:

https://docs.google.com/file/d/0Bz_ctrHrDz4wcjJWcENpaDJYbUU/edit





Roundhouse model # 1025
Modified WP 3417 completed



Roundhouse model # 1025
Modified WPMW 8696 completed



**Roundhouse model # 1025
Modified WPMW 0209 completed**



WP 3417
At the Western Pacific Railroad Museum



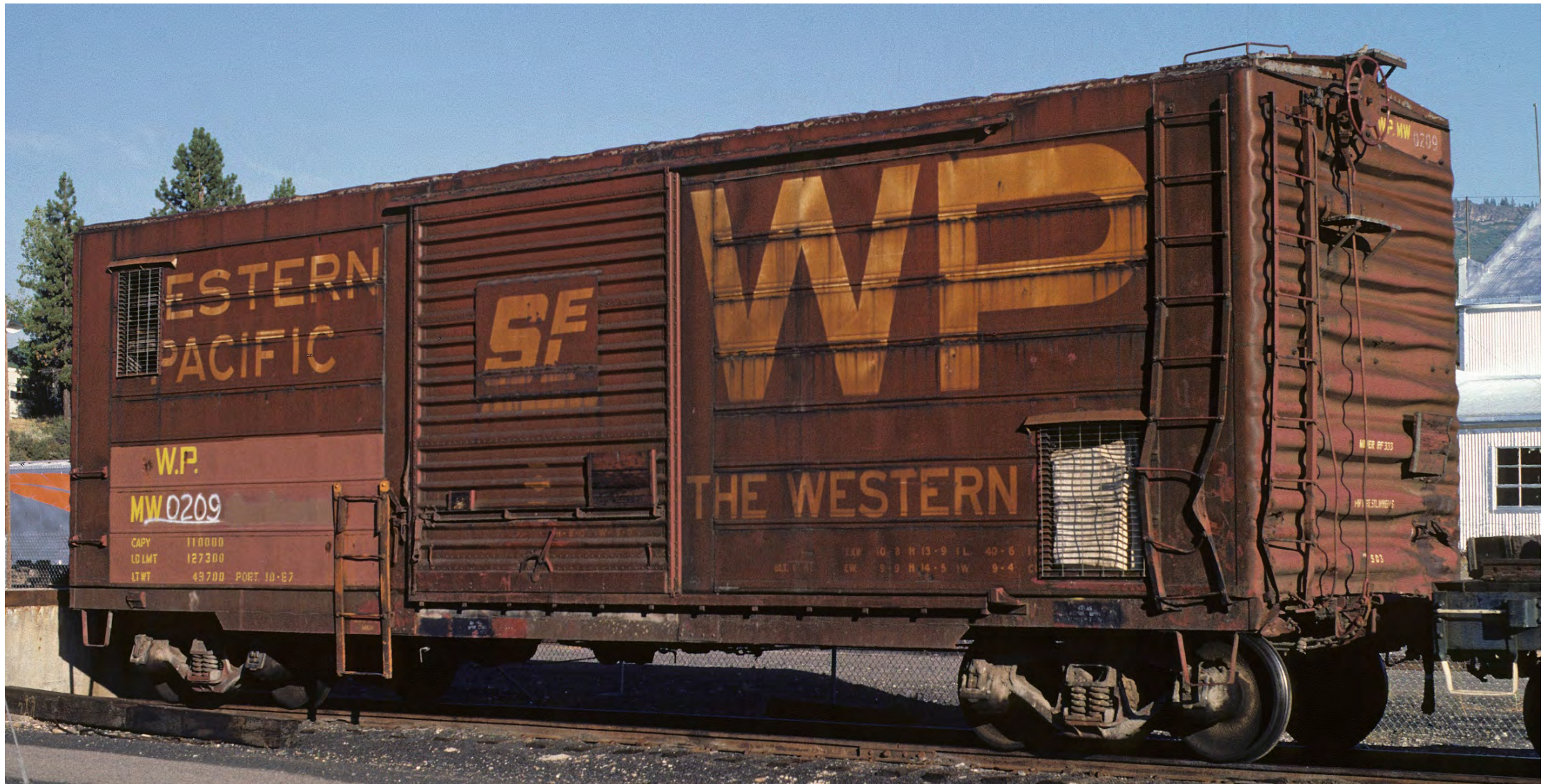
WPMW 8696
Norm Holmes photo



**WP 3417 (WPMW 8696) Greg Elems photo
Under frame showing one of the car number markings**



**WPMW 0209 Portola Ca. May 1983 Peter Arnold photo
Shown with exhaust pipe shown (not modeled)**



WPMW 0209 Portola Ca. Aug 1986 Peter Arnold photo

Prior to weathering the car, the decals were applied using several different Microscale Decals and Detail Associates decal sets.

The sets used were:

- Detail Associates Decal Set #9005 WP “The Western Way” Yellow Block Lettering
- 87-253 WP Freight Car Assorted Yellow Lettering
- 87-1012 Maintenance of Way equipment gothic letters, number and signs
- 90106 Alphabets Railroad Gothic Yellow

Adding weight to the car was done by adding weights on the inside of the car.

Weathering the entire car was done with Bragdon Enterprises weathering powders.

CREDITS

- FRRS Archives
- Peter Arnold (Photos)
- Greg Elems (Photos)
- Norm Holmes (Photos)
- Jack Palmer (RIP)
- Information from Various Modeling Magazines

Questions and Answers

- I'll do my best to answer questions on this project.
- Next year, more WPRR Maintenance-of-Way Cars