

New York Central Spec 486 Boxcar

Thank you for purchasing what is the “official” first Miniature kit from the North. This kit was made possible using 3D modeling of printing of kit’s parts and the master for making a mold of the main body. But mostly, this boxcar kit was possible with the help and sponsorship of Jim Kindraka.

Before getting to the instructions to put this kit together, here is a little history and modelling information for this car.

History and Modeling information

In the 1920’s the New York Central began building all-steel house cars based partially on the 1918 USRA all-steel design. They were alternative cars to the never adopted, 1923 ARA proposed standard. The cars were built with an 8’ 7” inside height (IH) and an 8’ 6” inside width, dimensions the NYC felt provided a stronger car than that proposed by the ARA. To capitalize on the greater strength, the cars were given a capacity of 110,000 lbs., a 10% increase. The boxcars differed from the USRA design, being originally built with 3-panel Camel-Gilroy (not Creco) bottom supported doors, Murphy 8/7 corrugated two-section ends and Murphy solid steel roof sheets, sealed with riveted U-section roof caps. Their design was termed “Specification 486” and eventually over 33,000 boxcars of this basic design would be built for other railroads and subsidiary lines, as well as one private company, Universal Portland Cement.

These house cars had long service lives, some lasting into the 1960’s. Two lots were rebuilt by the NYC in 1962 & 1963, so remained on the roster into Penn Central. A partial roster of the “as built” 8’ 7” IH cars is shown below. A full roster, including all the rebuilds, renumbers and upgraded versions is available in Volume 21 of the *Railway Prototype Cyclopedia*. That volume contains an extensive article on the “Spec 486” cars. The article has many prototype photos, including photos of cars built for other railroads with their lettering schemes.

The cars were generally painted NYC Freight Car Brown with Black underbodies for the bulk of their service life. In S Scale, decals and dry transfers for the cars are offered by Tichy Train Group, Cloverhouse (dry transfers) and K4 Decals. As always it is best to search through prototype photos when lettering any model.

<u>Railroad-Owner</u>	<u>Number Range</u>	<u>Builder</u>	<u># Built</u>	<u>Year</u>
Boston & Albany	50000 - 50999	ACF	1000	1924
CCC&StL	40000 - 41999	ACF	1000	1924
	48000 - 49999	ACF	2000	1925 - 27
	57000 - 57499	SSC	500	1921
	57500 - 59898	ACF	2000	1922 - 31
	CNJ	20499	SSC	1
Cincinnati Northern	4350 - 4749	ACF	400	1926
Hannibal Connecting	851 - 981	ACF	65	1934 - 35
Michigan Central	81000 - 82999	ACF/ SSC	2000	1924 - 25
	95000 - 95499	SSC	500	1923
	96000 - 97999	SSC	2000	1922 - 23
	98000 - 99499	ACF	1500	1923
Northampton & Bath	701 - 920	ACF	231	1931 - 35
New York Central	29000 - 30499	DSI	1000	1950 RBLT
	40000 - 42100	DSI	100	1937
	94500 - 115999	Various	15500	1927 - 36
	118500 - 123499	ACF/ MDT	3000	1936

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	181000 - 182999	ACF/ SSC	2000	1922 - 23
	189300 - 190999	ACF/ SSC	570	1938 - 42
Peoria & Eastern	3500 - 4100	ACF	550	1926 - 27
Pittsburgh & Lake Erie	36000 - 36499	SSC	500	1929
Reading	100000 - 100999	ACF/ SSC	1000	1925
Portland Cement	710 - 1000	ACF	300	1923

Instructions

The following instructions are based on personal experience and how the kit was design.

- As any resin kits, it is important to clean the castings from any residue of mold release agent. I use Isopropyl Alcohol (IPA), but a good wash in warm water with a dish-washing liquid soap like Dawn will work.

- Start by filling off any casting flash or defects. There might be some air bubbles along the bottom of the body, but these will not be visible from the side after construction. If any are visible, and were missed during casting inspection, you can fill them with UV-activated resin or plastic putty or contact me at sparent39@gmail.com for a replacement.

- Test fit the car body with the 3D printed frame. Due to variation in printed parts and castings, there will be some filling to do. On the printed frame, you may want to remove the scars from the supports. Also note the orientation of the frame in the body, the front (pointed) end of the brake cylinder should face the 'B' end of the car body. Easily identified by the brake valve support on the casting (see photo). I usually mark the 'B' end inside the shell for easy identification later.



If you want to add weight to your car, now will be a good time to add it. I usually add a couple of ½" washers on the car floor, glue in place at each end with silicone sealant. It is advisable to drill small pilot holes through the coupler mounting holes and bolster, so you don't glue a washer over a hole that needs a screw to come through it later.

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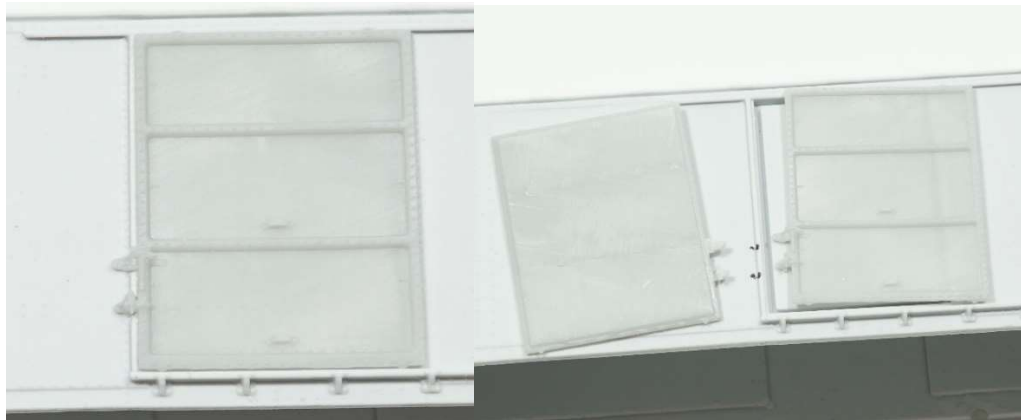


From my personal experience, I find it easier to detail the car body and underframe separately to minimize handling of the whole car. It also makes it easier to paint the underframe a different color before gluing them together.

Continue working on the boxcar body by adding the car doors. The doors are printed at almost scale thickness so they may be slightly warped. They can easily be flattened with warm water or carefully with a hair dryer or heat gun and pressed flat with your fingers on a flat cool surface. Make sure all the print scars in the back are removed/filled before doing this.

There will be a little bit of filling to do at the door handle details to ensure a proper fit on the car side.

The bottom of the door will also have some print scars to file off. Be careful not sanding the very tiny door wheel detail at each end of the bottom of the door. See Photos

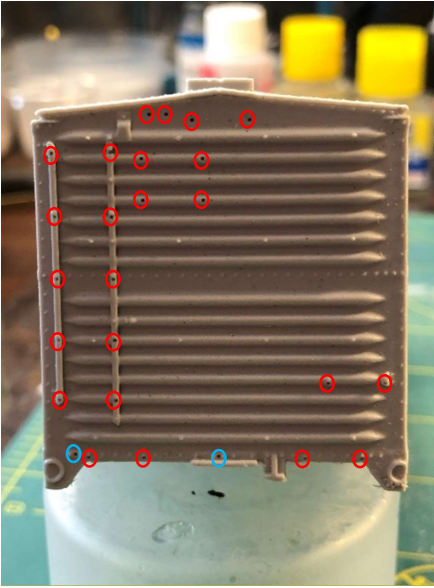


Once you are satisfied with the door fit, glue in place.

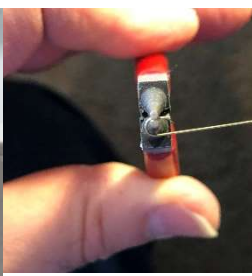
There are pilot holes or dimples in the body for hand grabs and location of other details. This will be a good time to drill them all before next step. See photos for location and drill sizes.

- For hand grab use #80 ●
- Delrin eyelets for coupler bars #76 ●
- Brake detail location #76

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There are 4 small grabs called "roping staples". Form these using 0.012" wire. They are located on the lower bottom of each side of the car. I formed them around a pair of round-nose pliers and left one end long to draw through the hole and then glue. The long end can then be cut off and the next roping staple formed. Cut these off inside as flush as possible, to facilitate fitting the floor later. See Photos



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Next, after adding all the grab irons, add the B end car details except the brake shaft, wheel, and brake retainer valve pipe.



Sand the print support scars at the bottom of the roof walk, You can also slightly sand the top of the roof walk to add a wood grain to it then glue in place, make sure it is centered. Then add the roof walk end-supports and roof walk ends details after carefully removing from the print base. The flat end of the lateral roof walks is meant to slide under the long center roof walk. It may take some filing to slide into place, forcing it can dislodge the main roof walk.

At this point, the car body detailing should be finished, except for the brake wheel shaft and valve pipe. I use a light filler primer to coat the car body, such as Dupli-color primer. It helps to fill the minor print artifacts and will show up any glue marks or spills that can then be filed off.

Before adding the details to the underbody, retest the fitting to the car body because of the grab irons or any extra glue built up in the back.

Then check for print support scars on the frame, or mini supports that need to be filed off.
See pictures for locations:

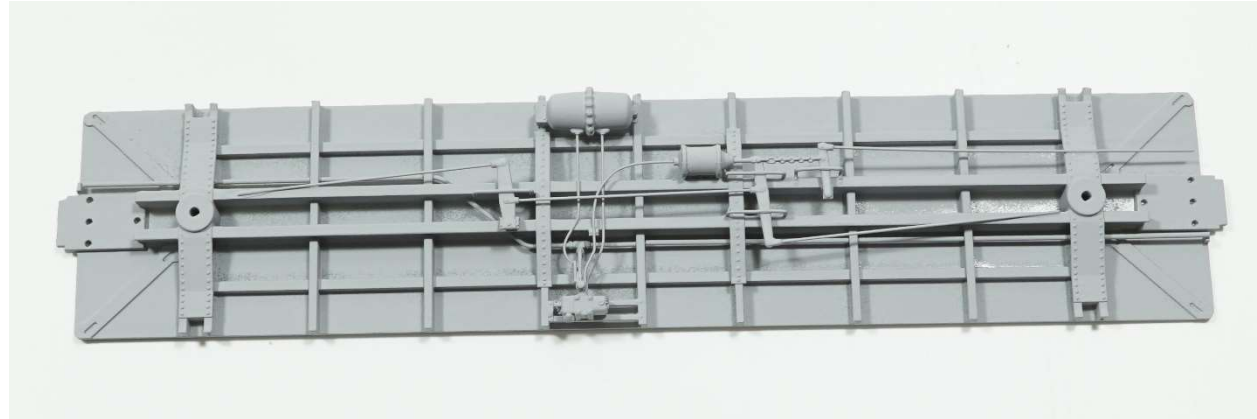


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Next, we suggest deepening the holes for the air pipes and brake rods. If you have some K&S small brass tubing (1mm tubing) in your stash, you can lengthen a # 76 drill shank and drill horizontally with a pin vise or rotary tool (See photo). Be sure and support the back of the brake levers while drilling so that you do not put too much pressure on them.

After drilling the two brake line holes in the air reservoir tank with a #76 twist drill, glue the reservoir in place.

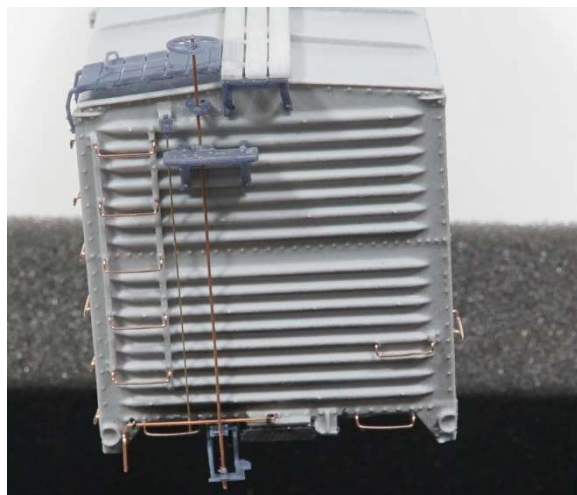
Start by adding the air line, using 0.032" brass wire. Using the supplied template, pre-form the air lines between the triple valve, air reservoir tank and brake cylinder using the 0.015" wire supplied.



Then use the same wire size for the brake rods, see pics. Once complete, prime the underframe with filler primer. I prefer my car underbody painted black, so I usually paint it first before gluing to the car body. That depends on your preference for the car underbody color. The prototype cars had a black underframe.

Next, test-fit coupler and trucks. The car is designed to have the standard NMRA/NASG truck bolster height and Kadee 802 coupler box. Finally, add the brake wheel with brake shaft and the air pipe for the control valve and brake levers.

Note: the brake shaft bottom support is printed as per the prototype. Which will not fit using a Kadee 802 coupler box. But it will fit if you are using HO couplers. If you are using a Kadee 802, you need to remove a small section. See photo.



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The final step is to add the stirrup steps. You will need to form them using the scribed lines as a guide. You also need to file off approximately half the width as shown in the photo. This to insert them in #76 holes to be drilled at the bottom of the car body. Use the location of the molded details of the stirrup steps bolts on the side of the car as a guide for where to drill in the bottom of the body. See photo.



Your car is ready for final finish or your choice. There are various tack board sizes with 2 different wood plank width included in the kit. The tack boards are reversible, you can install them with the steel plate behind or visible. Check photos of the prototype you want to replicate.



Model By Jim Kindraka