

Keeping Warm on the NYO&W in the Diesel Era

Modeling the Unique-to-the-O&W Heater Car in HO Scale

By Peter Terwilliger



F-3 #503 with Train #2 nears Roscoe with Heater CAR HT-2 in the consist. The O&W, like many other railroads, used heater cars to provide steam to keep passengers warm while maintaining maximum power control flexibility through the waning years of passenger service.
Walter Kierzkowski Collection

One of the most distinctive cars on the O&W were the two heater cars – cars homemade by the Middletown shops to provide steam heating for passenger trains once the road dieselized. Fellow society member Karl Diefenderer is offering a HO scale version of these cars in cast resin. He writes: “I am really excited to be able to make these kits. Having waited too long for someone else to produce the O&W Heater Tenders, I decided to give it a try.” As he points out, these cars are unlikely to get produced by any manufacturer, due to their limited mass appeal.

I model the New York, Ontario & Western as if it were still going strong into the late 1990's as part of an alternative-to-Conrail bridge route made up of the NYS&W, the NYO&W, and the D&H. So most of the time, I don't get to make those great O&W kits that society members make available – they are out of my time period. However, I got pretty excited when Karl posted to our newsgroup that he worked out a cast resin version of a heater car in HO Scale. After all, even in the 1990s, the NYO&W, like many other freight-only railroads, would not spend precious funding on converting their office train to head end power (HEP). Finally, an O&W prototype that I could model!



Say What? A Modern NYO&W?

Much has been speculated through the years on how the O&W may have survived beyond March 29th, 1957. Anyone who has spent any time on Google Earth tracking the 50 year old ROW will quickly realize that it is just that – speculation. However, set aside the skepticism about the rural ROW, the steep grades, the restricting tunnels, and the lost commodities of coal, milk, and passengers and take a flight of fancy where GP-30s and GP-60Ms lead Maersk/Sea- Land stack trains up the Red Hill grade...

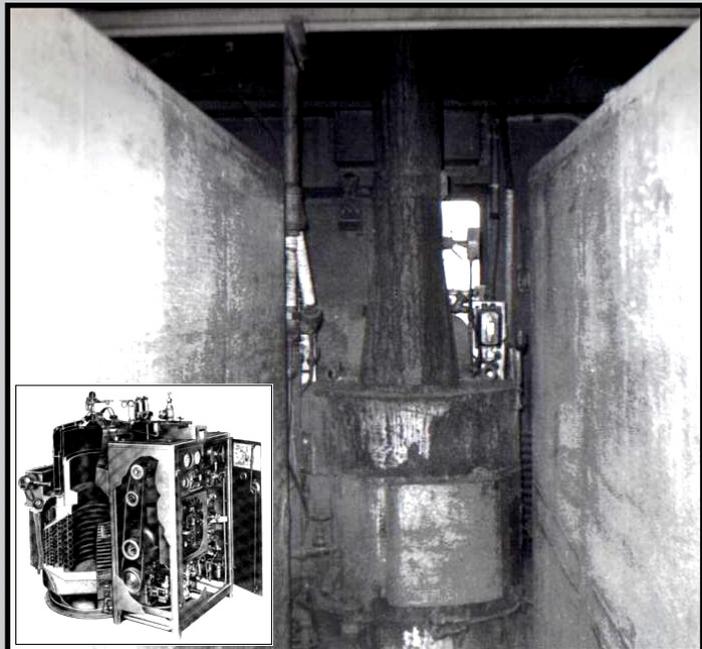
The Prototype

In 1947, Trustees Sieghardt & Gebhardt placed the final order for F-3s and NW-2s that would closeout the steam era on the O&W. The passenger cars used on the O&W however, required steam for heating. Instead of opting for the factory installed steam generators in the F-3s, the railroad constructed heater cars, fabricated to match the streamlined profile of the road's F-units. Perhaps the idea was that these cars could be used with any locomotive set, giving the power control people the most flexibility in engine assignments. However, in practice, the cars were limited to the F-3s, the only units equipped with the necessary steam generator controls.

The two heater cars were fabricated from tender frames of the original X-Class Bullmoose 2-10-2 tenders. Heater "Tender" HT-1 was fabricated by the Middletown shops in May of 1948. The car was just over 30 feet long and 14 feet high. It carried 6,000 gallons of water and 600 gallons of diesel fuel. It cost the railroad \$19,389.88 to construct. Heater Tender HT-2 was built the next year and was very similar in appearance, but varied in underframe details.

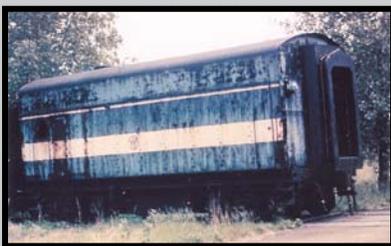
The heater cars each featured a Vapor Clarkson Steam Generator very similar to those units to have been offered as original equipment in the F-3s by EMD. Starting cold, these units were able to produce steam under pressure in two minutes. Once operating, the steam generator could generate 1,600 lbs of steam per hour at 250 psi. Once the generator was in operation, the only attention necessary, aside from regulating the steam flow to meet the demand, was to periodically blow down

the steam separator and to turn the fuel and water treatment filters occasionally during a run.



The interior of an O&W heatercar. *Walt Kierzkowski Collection*

The inset shows a cutaway view of a Vapor Clarkson steam generator. *Steves Vacant Lot (website)*

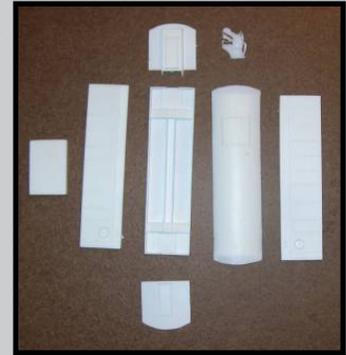


Allan Seebach Collection

Known as "coffee pots," "teakettles" and several other names, the cars served the O&W until the end of year-round passenger service in 1950. HT-2 was sold to the Fernwood, Columbia, and Gulf for \$3,750 later that year. Heater Tender HT-1 soldered on to cover winter specials and chilly late spring runs of the remaining "summer" only schedules. It remained up to the final roster (beyond the end of passenger service in 1953) and rotted away in the Camp Shanks warehouse in Tappan where it was presumably scrapped in 1970. Again, in my HO scale view of the world, it continued on to power the office train used for railroad related events, fan trips, and inspections.

The Kit

The kit comes as shown in the figure to the right. This is a basic kit containing the fuel tank, the left & right sides, front & back, the undercarriage, the roof, and the stack. The model scales out to 7½ x 32 x 1 ½ ft underframe with a 9½ x 32½ x 9½ ft body (w x l x h). Assembled, these combine for a close match to the prototype dimensions and matched the height my AHM based FTs very well. In practice, the O&W took great pains to match the roof contour of the F-3s; this kit's roof is a little too curved to exactly match my Stewart F-3. There is plenty of material to sand the roof contour to match just about anything, however.



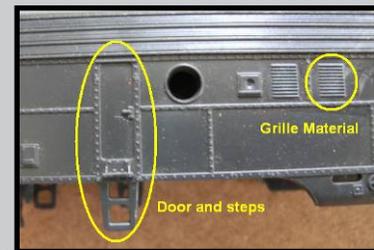
My modeling philosophy follows the two foot rule: The model, while on the track, must look right and have all the accessories noticeable from two feet away. This model fits right in with the spirit of the rule, especially as augmented with a few detail parts. However, should you be a detail oriented modeler, you will find problems: This model lacks the correct rivet detail as found on the cars, it is missing some features such as the beam that carries the poling pockets on either end, and the undercarriage is very simplified. The fuel tank also looks too wide and not quite thick enough. But as far as “two foot rule modeling” goes, this kit makes a very presentable model of a distinctive O&W heater car.

Building the Body

Assembling the car is quite straightforward. Step one has you glue together the sides, the front and back. I used gap filling CA. Caution: Be sure to place the vestibule end at the rear of the car, away from the portholes. Fortunately, several companies make CA debonders and, well, suffice it say I got it right the second time. These parts went together with a minimum of filing – a little being necessary to square up the each of the pieces.

Step two has you glue on the roof. The instructions note that you will need to file and sand to get a really good fit. Indeed, despite quite a lot of filing and sanding, I found that I needed to use squadron putty to ensure that all the gaps were filled. Once everything was dry, I sanded and filed the model to blend the roof and the body together to create the smooth radius bend so noticeable in these cars. Again, did I mention that the instructions encourage the user to file and the sand the parts until a good fit is made?

Even though the resin sides contain score marks to serve as doors and grilles (above the porthole), I decided to replace them with details cut from an old Athearn F-7 shell I had from an earlier project. The resin is easy to cut and shape. I carefully cut the castings from the old shell, filed them to fit the cut outs I had made in the resin, and, voila, I had the detail I was looking for. The diagram to the right shows the castings I used; any old F shell should do. Be sure to include the rain guard over the door. I did use the steps just under the door on the Athearn shell, but I filed them to match the rectangular appearance on the heater car. An alternative would be to use Tichy double step side mount steps.



The trickiest part of the body assembly is drilling the porthole. The resin is very soft and the rim around the porthole is easily damaged. I started using a small diameter drill, progressively getting larger and recentering to “sneak” up to the final diameter. A little sanding helped smooth out any rough edges.

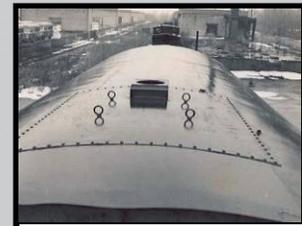
The heater cars have a “headlight” located on the vestibule end of the car. From the photos, it appears to some type of domestic or automotive related light



Marv Cohen

fixture. I used a B-unit headlight casting from Detail Associates to represent it. It is positioned about 2/3 up the car body and about 8 inches in.

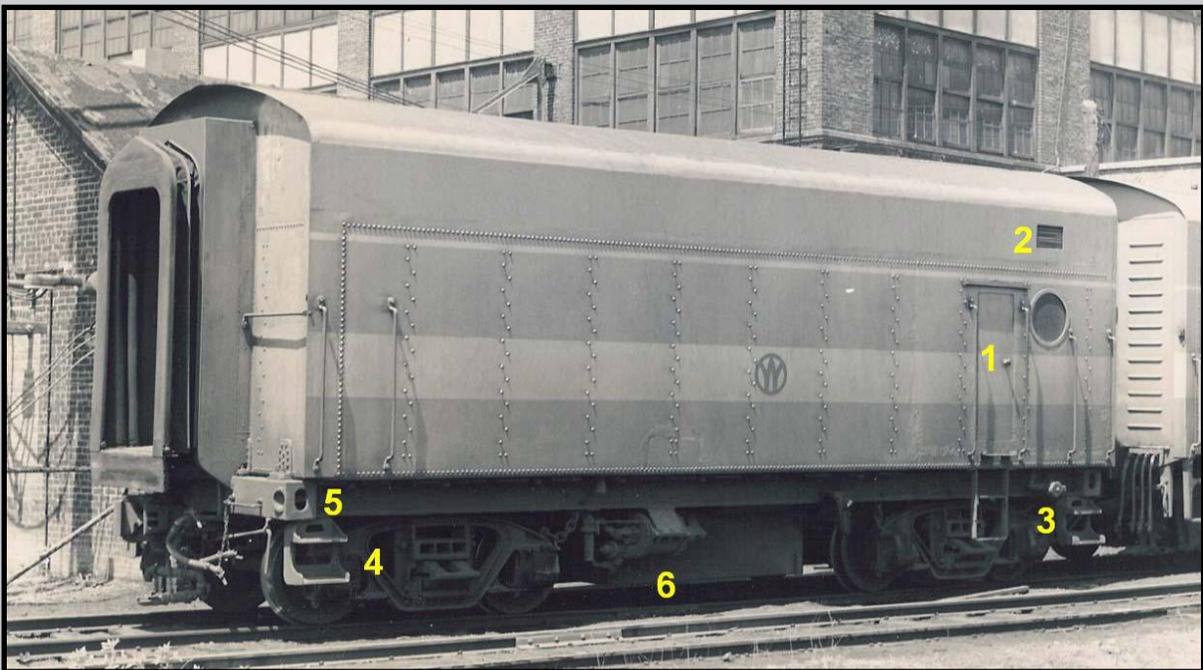
The final assembly of the body involves adding the stack to the roof. Using CA, I mounted the stack approximating the position as shown on the photo to the right. I added the lift rings (from Details Associates) which can get filled in with paint too easily, later. Once the glue is dry, use the same procedure as the portholes to drill out the body under the stack.



Walt Kierzkowski
Collection

Building the Undercarriage

The underframe comes as a one piece casting that includes the centerbeam. The fuel tank is a separate casting that must be glued on. I added a fill gauge, again salvaged from the F-7 shell to the lower right of the fuel tank as barely discernable in the below image.



Heater Car HT-1 outside the Middletown shops in the late 1940's.

Walter Kierzkowski Collection

The instructions note that the details for the heater cars are sketchy at best, therefore the modeler is left to his own devices to make the "right" decisions for the detail parts. It is the underframe details that provide the spotting differences between the two cars; I used details from a variety of sources to model these features of car HT-1, as marked in the photo above.

With the problem of the doors (1), the steps, and the louvers (2), solved as described above, it was time to turn to the various parts & pieces visible on the underframe. The Bowser line of detail parts, including Cal-Scale, is a great resource since most of these details are from when the car saw service as a steam tender. Another resource is Yardbird Classic Trains, a firm that provides parts for the repair and restoration of vintage model steam locomotives. I have compiled a list of resources at the end of this article for those interested in going beyond the two foot rule. Lacking specific information, however, I decided early on to delve into my parts box:

3. Filler pipe: I came up with a left over pipe connection from a Walthers PD covered hopper to serve as the filler pipe. Precision Scale has all kinds of filler pipes, faucet handles, and similar accessories that may be useful here.
4. Stirrups: The stirrups are located offset from the end of the car by the width of the poling beam. I wasn't able to find an exact match for them despite looking through a lot of parts catalogs. I settled on modifying a close set on an old Bachmann tender that I found on Ebay. These tenders always seem to be available, but reasonable matches can be had from caboose steps from Precision Scale or from tender steps from Yardbird (see resources).
5. Poling beam: This is a separate piece on the actual heater car, however, the underframe of the model does not allow space to add it. I mocked up a passable facsimile by modifying some extra lifting lugs from an A-Line lightweight double stack ("Twin-Stack") car. You can achieve the same results by gluing on some thin stock to the frame from with the appropriate holes to give the impression of a separate beam.
6. Brake cylinder The brake cylinder is direct from Cal-Scale. I fabricated its associated guard (the metal plate over it) from some left over roof walk material. It appears knurled in some photographs (?). I connected the cylinder to a brake beam, also from the parts box. The beam connects to the forward end of the brake cylinder and disappears between the underframe and fuel tank.



One of the nice things about my two foot rule is that I don't necessarily need to worry about what is on the bottom of the underframe. The detailed modeler should note that the kit comes with very plain and undetailed underframe. I did contemplate replacing it with an underframe from another tender model, but despite having a couple million diesel era spare parts, I wasn't patient enough to locate a suitable underframe. The underframe does have locations to mount Kadee coupler boxes in the right location. I also utilized the old trick of using spare Kadee couple boxes as the



truck bolsters. For trucks, I used Kadee Andrews trucks with 36 inch wheelsets, based on what looked right from the photos. I am debating about whether to replace these with something more modern to fit in my timeframe, however, for now, I like the look and they do come close to the prototype. Maybe I'll get around to replacing the coil springs with leaf springs someday.

The image to the left shows the assembled car ready for painting. Caution: Be sure to weight the car properly before gluing the body to the underframe. It takes about 10-15 cents worth of pennies to get the weight close to NMRA standards.

Painting & Final Detailing

The heater cars are painted in the same scheme as the FT/F-3 B-units. I gave the finished model a thorough washing to remove any hand oils, mold release, and other contaminants and let it dry overnight. I primed both the body and the underframe using Testors gray primer, then sprayed on the final coat of my version of O&W gray (see commentary below). Painting the interiors of the portholes and the stack black is a must for this model; the resin casting is quite thick and the black hides it quite well.

The cars were painted to match the paint on the locomotives and the scheme was very similar to that on a FTB or F-3B. The thick stripe is 19" wide and is located 25" above the bottom edge. The thin stripe at the top is 2" wide, 29" above the top of the thick stripe. The color, as delivered, is a close match to light imitation gold. This color also tended to fade over time becoming a very light cream yellow color.

The stripes and heralds work best as decals. I used the remains of old set of Mal Houck's F-unit decals for the imitation gold striping and the herald. An excellent resource for new decals is the Old & Weary Car Shop. An alternative would be to mask and paint the stripe and use a herald from Microscale's O&W FT decal set.

The heater cars, like all head end O&W rolling stock, had minimal lettering. The O&W herald is centered on the car. HT-1 was marked in red (faded quickly) on both sides just above the stirrups. For my modern version, I added some notation for the fuel and water fills, and marked the porthole side with an "F" to denote the forward (stack) end of the car.

A Word about Paint Color

Another controversy for O&W modelers is the true shade of gray. The units were delivered in a medium gray which almost immediately oxidized to a light blue-gray. Most modelers seem to go for the light blue-gray probably because that is the right look they recall from photos. A "long time ago" when I started modeling, before color images of the NYO&W were readily available, a sage "expert" recommended that I blend the two NYC grays together for a good match. Imagine my surprise when I found it almost exactly matches the O&W water color by Benjamin Dedek, EMD's artist in residence. And besides, who can really argue that the shade of gray on an O&W GP-60M is not quite right?



With the bulk of painting and decaling complete, I was ready to add the final details. It does take some patience to drill these tiny holes through the resin but it is soft and the work is soon done. I used 0.012 inch brass wire for the grab irons, two for each stirrup and a pair on each door. I used the same brass wire for the grabs on each end. Note that the grab irons were attached to vestibule on the rear of the car. I mounted two Details West grab irons to the right and left on each end of the underframe. The only remaining detail is to add the four lifting rings for the steam generator assembly as shown in the roof image a couple of pages above. I painted each of the details by hand to ensure that small openings did not clog with paint. The O&W appeared to paint everything O&W gray; my modern scheme matches OSHA derived practices of painting handrails and steps safety white.



The finished model "Dullcoted" but before weathering. I followed modern practices that use safety white for railings, grabs, and step surfaces.

Weathering

Reasoning that this car would see only light use on a modern day office train, I used minimal weathering. I use a very diluted mix of water based black paint with a drop of detergent to wash the model to bring out the detail, particularly for the grilles and louvers. I then spray on a coat of Testors Dullcote as a fixative which also serves to hide the decals and give the model an outdoor quality. I like to spray the trucks rail brown, then overspray the frame, the trucks, and the car ends with diluted Floquil rust. Finally, I lightly overspray the entire model with Floquil Grime and Dust to suit my tastes.

Regrets

As with every kit, there are always some things you wished you did differently:

1. **Frame:** I would replace or heavily modify the frame. The frame sills out of the box are too thick and lack space for specific detail that is the spotting features of each car.
2. **Fuel Tank:** The brake cylinder as I installed it looks awkward – it juts out too far beyond the car. A simple solution would have been to reduce the width of the fuel tank – something that I could not do without damaging the car by the time I discovered the problem.



A closeup of my model displaying the thick frame and the jutting brake cylinder.

Resources:

The kit is available for \$29.00 (includes priority mail) from:

Karl Diefenderfer
Box 572
Richlandtown, PA 18955

<http://iloveloghomes.com/Heatercar.html>

Paint, Decals O&W Info:
Cast Metal Tender Parts:
Steam Era Detail Parts:
Steam Era Detail Parts:

The Old & Weary Car Shop, www.theoldandwearycarshop.com
Yardbird Classic Trains www.yardbirdtrains.com
Bowser Manufacturing, www.bowser-trains.com
Precision Scale, www.precisionscaleco.com

References:

1. The New York, Ontario & Western in the Diesel Age, Robert E. Mohowski, 1994, Andover Junction Publications.
2. The Old & Weary Car Shop heater car page: www.theoldandwearycarshop.com/heater
3. Steve's Vacant Lot, <http://webserve.govst.edu/users/gaskrau/vapor.html>
4. Roscoe-Rockland: Steel Rails, Summer Homes, Ontario & Western Railway Historical Society Observer, October-December, 1989.



F-3 #503 arrives at Roscoe with Train #1 on March 24, 1949. The photo demonstrates the care that the O&W took to match the roof lines of the F-3s.

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Directory: C:\My Documents
Template: C:\Documents and Settings\terwilp\Application
Data\Microsoft\Templates\Normal.dot
Title: Modeling an O&W Heater Car
Subject:
Author: Peter Terwilliger
Keywords:
Comments:
Creation Date: 10/13/2006 7:21:00 AM
Change Number: 3
Last Saved On: 10/13/2006 7:28:00 AM
Last Saved By: Peter Terwilliger
Total Editing Time: 5 Minutes
Last Printed On: 10/13/2006 7:35:00 AM
As of Last Complete Printing
Number of Pages: 8
Number of Words: 2,531 (approx.)
Number of Characters: 14,427 (approx.)