

ACCURAIL'S NEW SHORT BOXCAR MODEL AND ITS MATCHES

PART FOUR: THE 1800-SERIES KITS

By Ray Breyer

(all photos from the author's collection, unless noted)

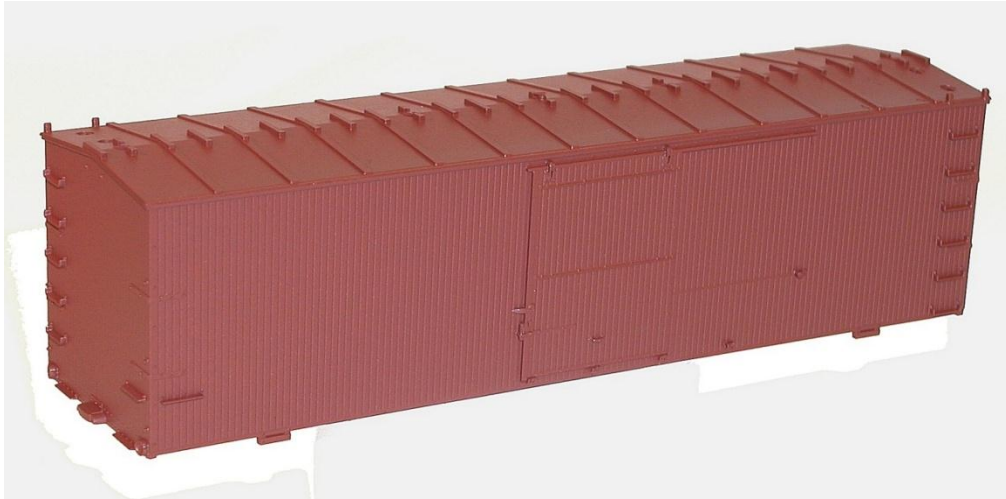
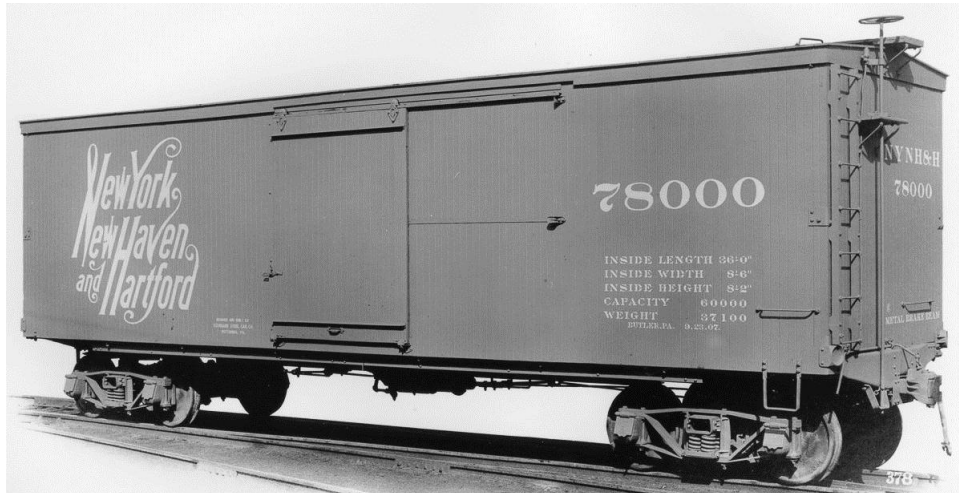


Photo of the 1800-series carbody, courtesy of Accurail

This final installment of the series deals with Accurail's upcoming [1800-series](#) kits, which include car bodies with all-wood ends and straight steel center sill underframes. The car body generally matches circa 1905 MCBA recommendations, but this style of 'modern technology' underframe only started gaining popularity in the industry after 1909 and its adoption for use under thousands of Dominion / Fowler type single sheathed boxcars. Overall, this model represents an early prototype since most cars of this type were rebuilt with steel ends beginning in the late 1920s. Still, some of these boxcars could be seen in service through WWII and into the 1950s, and as with the [1400-series](#) models these kits will really be useful as kitbashes to represent cars with steel center sills and trussrods.

THE 1800-SERIES KITS:



Standard Steel Car Co. builder's photo

Accurail has announced fifteen models in the initial release of the 1800-series kits. As with all of their other car offerings, the releases include undecorated (#1800), and two cars painted with dimensional data only (#1898, mineral red, and #1899, oxide red). The releases also include twelve different road names. Most of these announced road names are good out of the box, so long as you pay attention to the era-appropriateness of the paint and lettering, most of which should be for cars painted in the 'Teens and Twenties.

1801: CHESAPEAKE & OHIO



Standard Steel Car Co. builder's photo

The C&O never had very many boxcars on its roster, but it made up for their small numbers by having a wide variety of car types. That means that if you look hard enough it's pretty easy to find an acceptable prototype for just about any base model. That's definitely true for the 1800-series kits, as the C&O bought 500 similar cars in 1910 and 1911 (400 plain boxcars and 100 automobile carriers). Since the prototypes were slightly smaller than the Accurail model, and featured many detail differences (most noticeably the 'wrong way' doors), this model is only an 'acceptable stand-in'. The cars were rebuilt with steel roofs in the early 1920s, and were surprisingly long-lived. Almost all of them were still on the roster 20 years after they were built: 98 of the XAs and 351 of the XMs were still running in 1930. The Depression's traffic downturn and the looming archbar truck ban doomed these cars, and they were all gone by 1935.

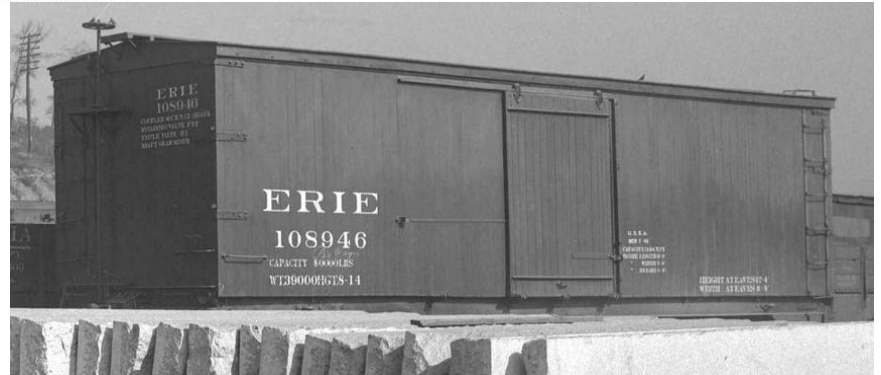
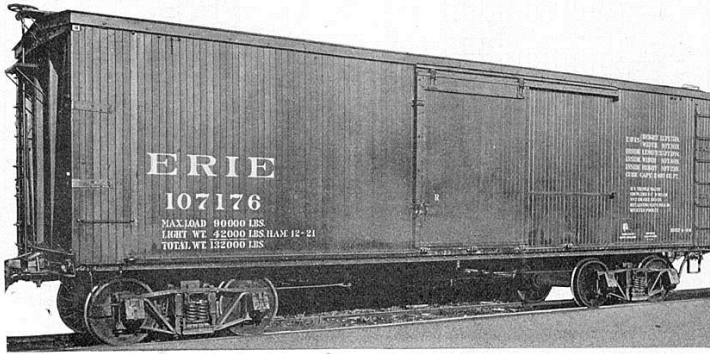
1802: DELAWARE, LACKAWANNA & WESTERN



Hoboken NJ, 1920. The Sirman collection

The Lackawanna, on the other hand, was very consistent with their boxcar designs, only tweaking them slightly from time to time to take advantage of proven and worthwhile technology advancements. Serving the industrial heart of New York and New Jersey meant that the DL&W also bought a very large number of these virtually-identical cars, especially in the days just before competition from box trucks started biting heavily into rail traffic. The railroad built 4,000 cars with all-wood bodies but straight steel underframes between 1909 and 1912, numbering them in the 38000-41999 series. As with most pre-WWI cars of this type they received steel roofs in the early 1920s, and ran in diminishing numbers through WWII (with cast steel trucks). The last 14 cars of the type were retired in 1952.

1803: ERIE



At first glance the Erie seems to be another railroad with a surprising amount of consistency in their boxcar designs, but an initial look through their ORER listings can be deceiving. Finding a group of 10,000 plain and automobile boxcars in the same railroad with the same ORER dimensions is a hard enough feat to do in 1950, let alone 1915, so it seems as though having one or more of this block of cars in a pre-WWII roster is as much of a no-brainer as having a few X29s around.

Sadly though, as you can tell by the above two photos, the cars came with more differences than what the ORERs indicate. Doors went in either direction, side sills changed heights, and ends could either be double sheathed wood or single sheathed 'Indestructible' type. These 10,000 'identical' cars quickly become a kitbasher's dream or nightmare, depending on your point of view. There were still 6,000 of these circa 1910 boxcars on the Erie's roster in 1930, but the Depression killed them off: by 1945 there were only five stragglers left, and they were all gone by 1947.

1804: NORFOLK & WESTERN



NWHS Archives

This is the more common partner of Accurail kit [#1406](#), rebuilt with a steel roof in the early 1930s but retaining the car's original double sheathed wood ends. It's also an important model to have for many N&W modelers, since these cars made up one third of that road's boxcar fleet at the beginning of the Depression. The BH and BI car classes dwindled quickly after 1930, but there were still nearly 1,000 of them on the roster at the end of WWII. The cars were gone from the revenue roster by 1950, but a few of the cars outlasted N&W steam power while in MOW service.

1805: READING



AC&F builder's photo, Al Westerfield collection



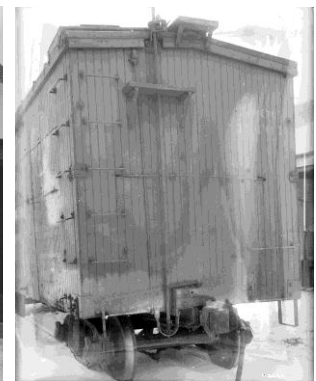
DL&W company photo, Steamtown NPS Collection

These models are most likely stand-ins, since I can't seem to find a real Reading car that matches them exactly. As I wrote previously in the 1300 and 1700 series sections of this survey, the P&R did own a large number of basically matching short boxcars, but they all had fishbelly underframes. In general, the 1800-series car body matches the [XMp class cars](#), but the underframe doesn't. About the only thing I can find as a match to these cars is a small group of very old ventilated boxcars (which don't show up in their ORER listings anywhere because they were leased cars, not owned).



AC&F builder's photo, Al Westerfield collection

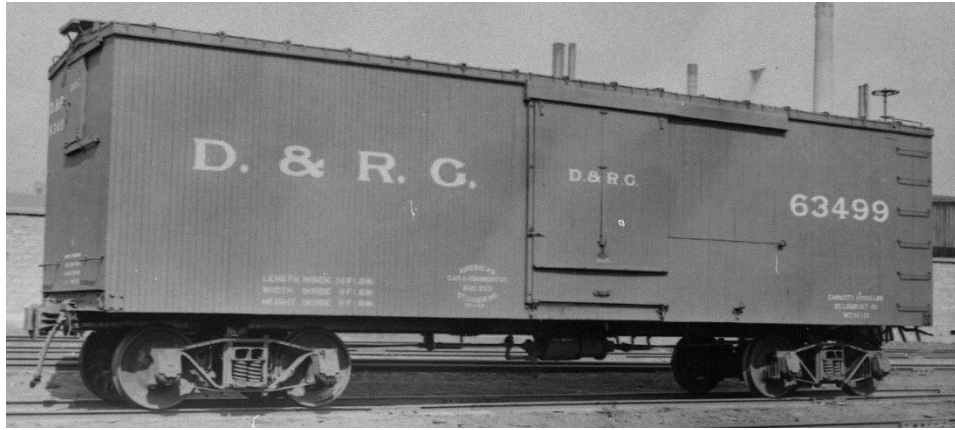
1806: TOLEDO & OHIO CENTRAL (NYC)



Both photos, DL&W company photos, Steamtown NPS Collection

Although these new Accurail models are based on various New York Central boxcar designs, the railroads in that corporation never built many house cars with straight steel center sill underframes, at least until their circa 1916 all-steel automobile boxcars were introduced. Ultimately, the NYC only ever built just over 2,000 short boxcars like this: 1,150 plain boxcars in 1907 and 1909, and 1,000 auto boxcars in 1910. The plain boxcars were all built for the T&OC and placed in the 11200-13349 series. 50 of the cars, as seen above on car 13161, were built with 8-foot wide door openings. This small group of boxcars was renumbered as NYC cars and was swallowed up into that railroad's huge roster of short boxcars after 1924.

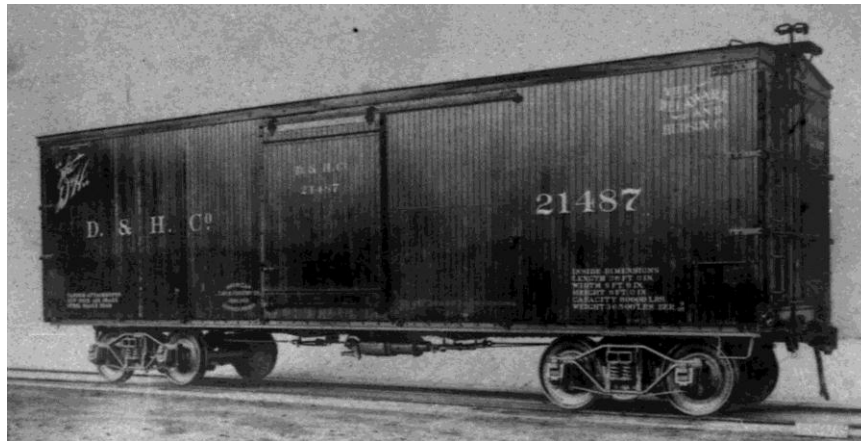
1807: DENVER & RIO GRANDE



AC&F builder's photo, Al Westerfield collection

This model represents the as-built version of these boxcars with all wood ends. These 1,500 cars were built for the Rio Grande by ACF in 1909, and ran as-built until rebuilt with new doors and steel ends in 1926. See Accurail kit [#1401](#) for the newer versions of these cars, which ran into the mid-1950s.

1808: DELAWARE & HUDSON



AC&F builder's photo, Al Westerfield collection

If you have a need for a large number of D&H boxcars and model any point between 1906 and 1960, this is the kit for you. With the model, a few reference photos, and a determination to model, you can use this base model to represent just about any non-steel, non- single sheathed, boxcar that the railroad ran for more than 50 years.

Between 1906 and 1907 the D&H had ACF build 3,800 generally identical boxcars, placing them in various places in the 19500-23805 number series. These cars quickly became the dominant boxcar type on the railroad, not dipping below 50% of the roster until after WWII. In the 1930s most of the cars were rebuilt, first with 'Indestructible' single sheathed ends, and later with 3-panel 'inward indent' Hutchins steel ends. The few automobile cars on the roster were downgraded to plain boxcars, but retained their 8' wide doors. During WWII a few cars had AB brakes installed, and more had power handbrakes installed.

As late as 1950 these cars still accounted for 45% of their boxcar roster. The looming K brake ban of 1954 spelled the end for most of these cars, and the roster was down to 355 in 1955. 42 cars were still on the roster as late as 1959, but those were all retired by 1964. A few of the cars stuck around into the late 1970s in maintenance of way service, which is why so many of them have been preserved today..



Two D&H shorties downgraded to company sand service. These 14907-built boxcars have both been rebuilt with Indestructible ends, and car 35452 has a power hand brake (but retains her K brakes)

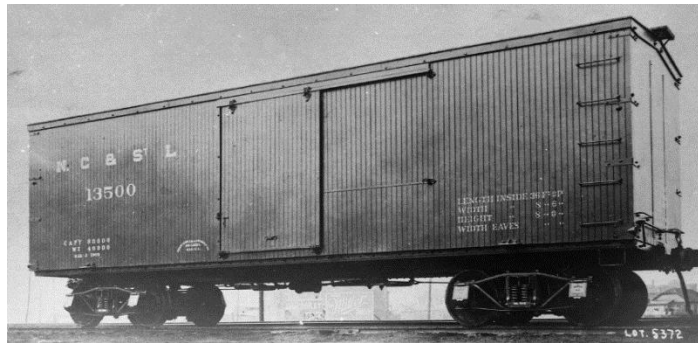
1809: BOSTON & MAINE



Boston Public Library collection

This model represents the as-built mate to Accurail kit [#1407](#), which is a stand-in for the B&M's cars rebuilt with steel ends in the late 1920s. Those kits are 'fleet grade stand-ins' at best, due to their incorrect steel ends. However, this kit will do a much better job in representing the majority of these cars that were rebuilt with steel roofs, but which did not get steel ends. Of the 3,720 cars built only around 1,400 received steel ends meaning that in 1930, 2,084 were still rolling with double sheathed wood ends. By 1945 the overall numbers of these cars had dropped significantly, with 152 double sheathed and 112 steel-ended cars still in use. The cars were dropped from the revenue roster by the end of 1948, but many were retained in captive online service and for the road's MOW fleet, with a small number of the cars surviving into the early 1970s.

1810: NASHVILLE, CHATTANOOGA & St. LOUIS



AC&F builder's photo, Al Westerfield collection

The NC&StL bought 3,100 cars from ACF in 1912, numbered 13500-16599. These cars made up over half of their boxcar fleet through WWII. As with most cars of this type the cars were rebuilt during the late 1920s with steel roofs and ends, making this model more appropriate for earlier themed layouts.

1811: ILLINOIS TERMINAL SYSTEM



Both photos Illinois Traction Society archives

The Illinois Terminal's 100 cars in the 8000-8099 series were built by ACF in 1924 and originally designated for general merchandize use. During the Depression the cars had been rebuilt with special wide swing coupler pockets for use as LCL cars on tight interurban trackage, and generally not interchanged. The cars survived in service on the ITC until the end of electric operations in 1956.

1812: CENTRAL RAILROAD OF NEW JERSEY



AC&F builder's photo, Al Westerfield collection

The CNJ bought 3,500 cars in the 10000-13499 series in 1904 and 1906. Starting in the early 1920s the road began rebuilding most of the cars with steel roofs, and either composite or pressed steel ends (the few photos I've been able to find show outward rib Hutchins steel ends). By 1930 only 490 of the cars retained their original double sheathed ends, and those cars were all retired before WWII. Of the rebuilt cars with improved ends, 58 were left in 1945 and 16 in 1950, with all of them long gone by 1953.

OTHER PROTOTYPE ROAD NAMES



The Bangor & Aroostook Railroad was created through a merger of several smaller Maine railroads in 1891, and the railroad was saddled with a dizzying array of small groups of very different boxcars through the early 1920s. At various points in time the railroad attempted to rationalize their car fleet through purchases of new equipment. While their XM-1 type single sheathed boxcars are fairly well known, before those cars were introduced in 1927 the railroad attempted to standardize on 38-foot, double sheathed boxcars. Accurail kit [#1713](#) represents one group of 200 of these cars, while the 1800-series kits can represent two more. While the BAR 1501-1700 series kits represent a small group of cars that the BAR ultimately converted into pulpwood flat cars, an 1800-series kit can represent their 60100-60399 series cars fairly well. These cars were built in 1918 and ran virtually unmodified until the last half dozen were finally retired in 1954. Similar and more numerous cars with lighter steel center sills and trussrods are discussed below.



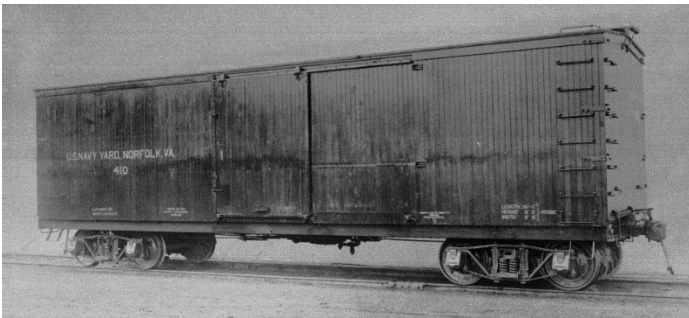
D&SL 206 rolls through Fireclay CO on 4/24/1936. The first boxcar in the train is D&SL 52114, one of a group of their cars resembling the Accurail model. Several similar D&SL boxcars are also in the train. Otto Perry photo

The Denver & Salt Lake bought two groups of cars from Pullman in 1913, and numbered them in their 52100 and 53000-series. These 275 cars were among the most modern boxcars that road owned, and were very similar to the Rio Grande 62000-series boxcars, which the D&SL also had a few of. These cars were never significantly rebuilt, and I can't find any evidence that they ever received steel ends. The group of cars survived WWII largely intact, but all but seven of them were retired by 1950. Surprisingly, a few of those cars stayed on the Rio Grande roster, still wearing D&SL reporting marks, until the last one was finally retired in 1961!



L&N 102091 in Hackensack NJ, 3/1929. DL&W company photo, Steamtown NPS collection, image X6634

The L&N owned 4,100 cars similar to the Accurail model. The 2,000 cars of the 10000-11999 series were all rebuilt in the late 1920s with corrugated steel ends (use an Accurail 1400-series kit for those), but 1,169 other cars entered the Depression years without being rebuilt. 1,000 of those cars survived the end of WWII but were quickly scrapped thereafter. The last of these cars, L&N 6981, last shows up in the 1950 ORER.



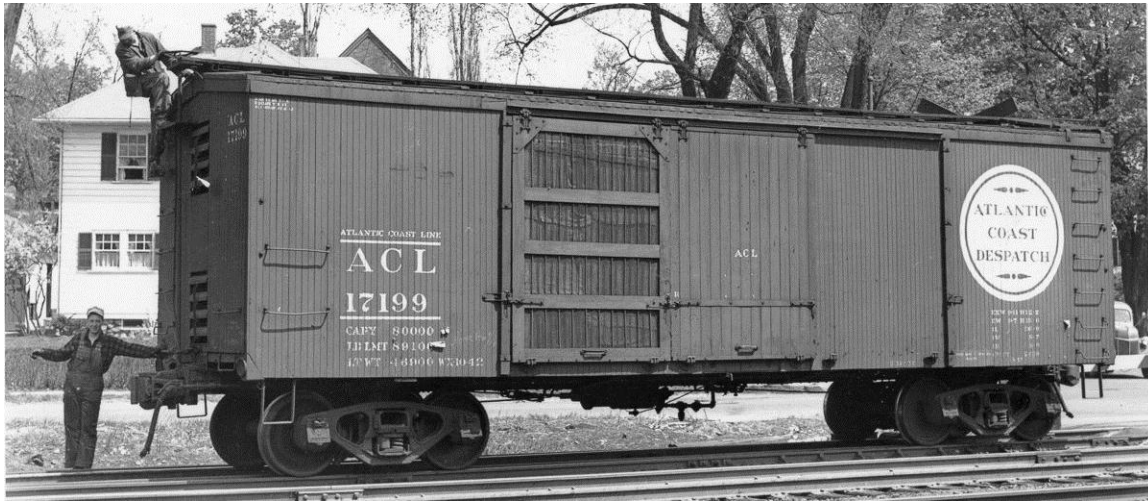
ACF builder's photos, Al Westerfield collection

The American Car & Foundry Company was the largest freight car builder in the world during the first quarter of the 20th Century. As a large company specializing in the construction of moving equipment it's natural that the US Government would turn to them for the bulk of freight car orders during World War One. ACF was awarded contracts to build 31,000 of the USRA's freight cars during the war, but the company actually started supporting the war effort well before that. A read through the company's record of their wartime activities, "[The American Car And Foundry Co. In Khaki](#)", reveals an amazing variety and volume of warfighting equipment built at the same time. With wartime contracts totaling \$148 million dollars (\$2.8 billion in today's [dollars](#)), ACF built everything from 148,000 tent pegs and 143,271 soup ladles, to 100,000 wagon wheels, 1,200 motorized repair trucks, 53,319 artillery caissons and limbers, and eight submarine-chasing patrol boats!

The company's freight car output during the war was equally impressive. Besides the 31,000 USRA freight cars ACF built over 34,500 freight cars for export use, including narrow gauge cars for frontline resupply, and a huge number of boxcars and gondolas for use in England, France, Italy and Imperial Russia. Buried in this giant pile of cars were a few hundred pieces of rolling stock designated for domestic use by the US Navy and US Army. This group of orders included 206 boxcars for the Army and another 58 for the Navy. Photos indicate that these 30 and 40 ton capacity cars were standard 'catalog cars', most of which resembled the 1800-series kits. Sadly, these were mostly captive service cars for use in naval bases and munitions plants, so the chance of seeing them on mainlines was small.

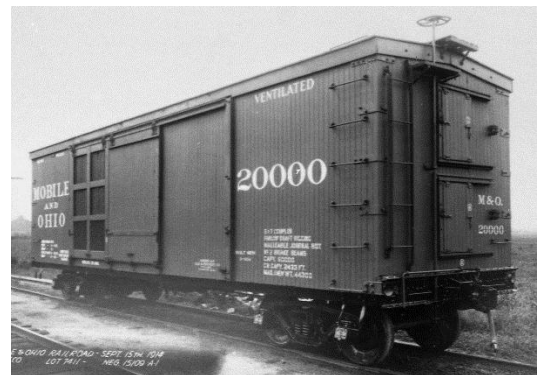
KITBASHING POTENTIAL

As with all of the other kits in this new Accurail model range, converting the 1800s into something other than a plain boxcar is definitely a possibility. Usually, railroads that bought modern-technology short boxcars with straight steel underframes also bought them as either ventilated boxcars or as auto carriers (besides the C&O, I haven't found a railroad that ordered all three types built around the same basic carbody design). With few exceptions these cars weren't built in very large numbers, but there were enough of them to make them worthwhile modeling targets. And while kitbashing 'fleet grade stand-ins' may not be the most optimal way of modeling many of these cars, they'll do in a pinch, or until someone steps up and makes a wider variety of pre-1918 built boxcar models available.



Of all the ventilated boxcars that can be kitbashed using the 1800-series kits, the Atlantic Coast Line's O-17 series cars are probably the most important. These 2,000 cars were built in the railroad's shops in 1922 and 1923, and became the longest-lived ACL ventilated cars, with 14 still on the roster in 1965 (and a handful of stragglers lasting until 1977!). The ACL also built 175 of these cars as plain boxcars (ACL 19000-19175), but converted them to ventilated cars in 1940.

There are better ways of modeling these cars. Sunshine released kits [#35.1](#) through 35.8 covering all variants of these cars, but good luck finding any of those models (released in 1995; 21 years ago!). Likewise, the old Con-Cor [ventilated boxcar](#) model is basically an O-17. But the detailing on those models is crude and somewhat inaccurate, and they're not always available. 3D printed detail parts, specifically end vents and the ventilated doors, would make converting these Accurail models fairly painless.



Another important ventilated boxcar type was the Southern's 120000-123249 series. Built by ACF in 1914, these 3,250 cars made up an important part of the Southern's ventilated boxcar fleet. The Southern also built 200 of the cars for the Mobile & Ohio, then under the Southern's control, in their 20000-20199 series. While the M&O's cars all disappear from the ORERs by 1930, the Southern's cars lasted a long time, with 347 still rolling in 1945 and 60 in 1950. 18 cars survived past 1955, but were scrapped shortly afterwards. Before WWII the Southern owned one of the largest fleets of ventilated boxcars (8,602 cars in 1930), and these cars made up a third of their fleet, so in a certain context they're a very important freight car to consider adding to a fleet. As with the ACL cars, 3D printed parts will make modeling these important but overlooked Southern freight cars a snap.



AC&F builder's photos, Al Westerfield collection

The above four cars represent a small group of 900 cars built around the first decade of the 20th Century, and scrapped during the darkest years of the Depression. CNO&TP 13051-13150 was built by ACF in 1913, repainted as Southern 270400-270498 in 1917, and scrapped between 1930 and 1935. C&O 3250-3349 were built by Standard Steel in 1910 and survived to 1932. DL&W 10000-10199 were built by ACF in 1909, and scrapped or converted into plain boxcars by 1931. Finally, Erie 112000-112499 were built by ACF in 1907, and scrapped by 1935. Overall these four car groups don't represent a large number of freight cars, but they survived their entire service lives as automobile carriers on railroads that didn't have a whole lot of that car type, meaning that in a certain context a layout may need several of these.



Along with the T&OC plain boxcars mentioned above, these 1,000 NYC automobile boxcars were the only other short boxcars built by that corporation with straight steel center sill underframes. Built by MDT in 1910, except for their underframes the cars looked just like any other of the nearly 10,000 short auto carriers rostered by NYC roads. The cars lasted a surprisingly long time: while there's no mention of them being rebuilt in the NYC's 1924 freight car diagram book, they would have had to have been rebuilt with steel roofs at some time in their lives. And while they're not listed at all in the 1944 diagram book, there were still 22 of them running in service that year according to the ORER (downgraded to plain boxcars, but retaining their 10-foot wide doors). The cars, along with the rest of the NYC's short boxcar fleet, disappeared by 1950.

Trussrods!

Now we come to the really fun section of kitbashing these cars: adding trussrods. While I discussed adding trussrods to the [1400-series](#) kits, and while there were a lot of older cars rebuilt with steel ends and steel center sills, those prototypes would have all started off as these 1800-series cars without steel ends. These 1800-series models are also useful for a huge number of cars that never got rebuilt, and even for large, all-wood boxcars that wouldn't have survived the wood underframe ban of 1929.

One note: although older, all-wood, double-sheathed boxcars tend to look the same to most casual modelers, you do have to be careful when choosing a prototype for these Accurail models to represent. The NYC cars when designed in 1909 were actually fairly large cars. Not the biggest boxcars on the rails (there had been 50-foot cars since the 1870s), they were still larger than the 'average' boxcar of the time. An accepted 'rule of thumb' is that any car with a cubic capacity of 2,448 cu/ft will be too small to represent these cars, which the NYC had rated at 2,601 cu/ft.



*A triple threat of NYC-influenced boxcars that can be modeled using the Accurail 1800 as a starting point. To the left is a NKP 25000-series boxcar, built when that road was controlled by the NYC&HR. In the center is Big Four 43259, another NYC Lines boxcar. Finally is Clover Leaf 6473, one of the largest boxcars that road owned. The cars were bought from ACF and bear a striking resemblance to NYC-designed boxcars. Being a cash-strapped road, it's likely that the Clover Leaf tacked their order onto a pre-existing one to save a few bucks.
J.W. Barriger photo, St. Louis Mercantile Library collection*

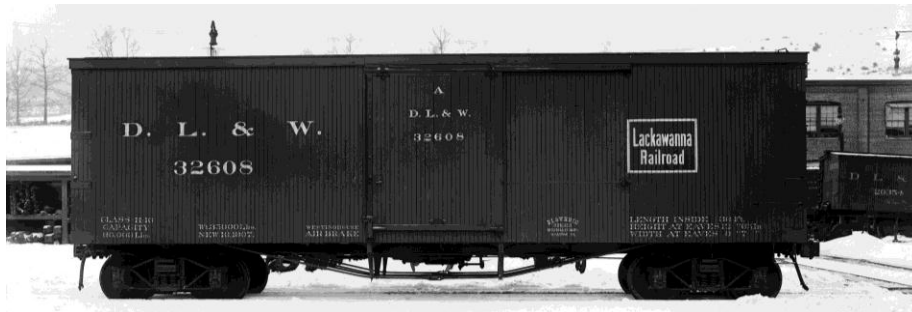
However, using the '2448 rule' really isn't all that accurate. That cubic car capacity was a recommended practice from the Master Car Builder's Association, and was a general guideline for railroads to use when designing a useful new boxcar in the early 1900s. Looking through ORERs you'll see a lot of cars that will match the inside dimensions of the MCBA's RP exactly. Too exactly: many or most of those ORER listings are wrong. Start matching car number series with official railroad diagrams or erection drawings, and you start to see that they're usually grossly wrong, and that the cars are actually far larger on the inside than what's stated in the ORERs. So use the OUTSIDE dimensions in the ORER as your general guide, which are a little more accurate, and which will give you a better feel for which cars come closest to the Accurail models.

I did attempt to go through ORERs from 1905 to 1930, trying to catalog just how many cars there were that would be a good match. I stopped after a couple of days of digging, since there were so many of them! I'll just highlight a few of the more useful ones that I found photos for.



Jack Delano photo, LoC call number 8c03662

As mentioned above, the BAR attempted to modernize their boxcar fleet a few times. Their most numerous pre-steel and pre-single sheathed boxcars were the 60000-60099 and 60500-60699 series cars, built (I think) between 1918 and 1920. These 300 cars represented the largest group of identical boxcars owned by the railroad until 500 ARA-type single sheathed cars were delivered in 1927. These were 'modern throwback' cars similar in philosophy to the Southern's SU-type boxcars: semi-modern construction techniques, but built as cheaply as possible. Primarily used to haul potatoes, these cars survived as a group through the end of WWII, and nearly 100 of them lasted to the K brake ban, which ended their revenue service lives.



*A newly-delivered DL&W 32608 sits still for its company portrait on a snowy day in February 1908.
DL&W company photo, Steamtown NPS collection, image B0183*

As I mentioned previously, the Lackawanna's short boxcars were surprisingly consistent in size and overall spotting features for most of the first 20 years of the 20th Century. That makes it a simple job to take an Accurail 1800, add trussrods (generally six) under the car, and change the car number to something between 26000 and 37999. The railroad still had 2,185 cars like this running in 1930, with the last of them being retired during the middle of WWII.



NKPHTS archives collection

When you think 'boxcar', the Wheeling & Lake Erie Railroad, as a mid-sized coal hauling line, usually doesn't leap to mind. But they did have a sizeable boxcar fleet which did tend to get around. I've got photos of Wheeling boxcars as far away from home as the coal fields of New Mexico, the ports of New England, and the hollers of Tennessee. Their older, double sheathed cars especially seemed to get around a lot, probably due to their brief association with the Wabash. As a NKP modeler I definitely want to have a few of these 'family road' cars, and their 22000-22399 series fits the bill nicely. Built by the W&LE's Ironton Shops in 1917, these cars were originally all-wood gondolas with steel center sills. Built with wood ends and Murphy XLA roofs, the cars lasted until the last four dropped off the Wheeling's roster in 1935.



The Sirman collection

The unusual automatic door closing device on this Katy car (likely experimental) would catch most people's eye, but what caught my attention was the ORER listing: MKT 80100-91175 were rebuilds, having been built in 1906 and rebuilt immediately following the USRA handing railroads back to their owners after WWI. Originally all-wood cars they were rebuilt with steel center sills, steel roofs, and steel I-beam end crash posts. In 1930 there were 5,019 of these cars on the Katy's roster, or nearly 45% of all of their boxcars. For Southwestern area modelers focusing on the 1924-1940 period, these are must-have freight cars.

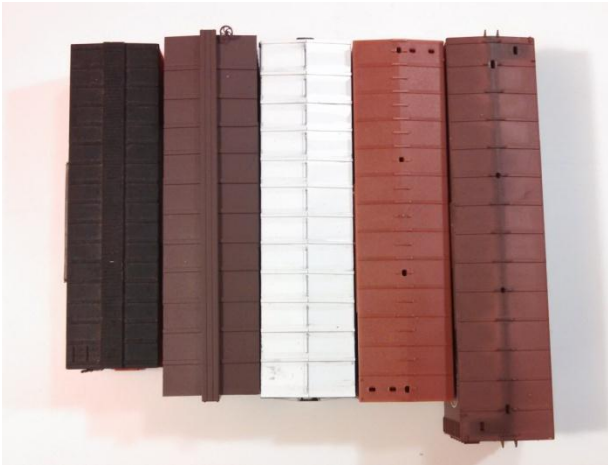


NYC 233337 helps take down the interurban wire through Arcadia, OH, in 1932. Dan Merkel collection

Finally, you can't overlook the New York Central. As with the steel-ended 1400-series kits, these 1800s are easy to justify on just about any layout set between 1915 and 1949, simply because there were so many of them on the NYC's roster. They went everywhere and did everything the railroad asked them to do for over 30 years, and a few are still with us, tucked into weedy back corners of museums all across the East Coast.

Too small!

I'll close this installment with a word of caution. Although you can use these new Accurail models to represent a huge number of different boxcars, you can't use them for everything. Here's a quick size comparison between various boxcar models:



From left to right: Poocher/AHM '1870s' boxcar, new tooling Roundhouse boxcar (with cast-on door), old tooling Roundhouse boxcar (with sliding door), Accurail 1800-series boxcar, and Accurail USRA double sheathed boxcar. This lineup represents five of the most common early boxcar models available in plastic. Although the heights are a little skewed in this photo, you can tell that each of the base model boxcars shown here are all different heights and lengths. That means that each base model is best used for a certain range of prototypes. While each is a good starting point for several (yes, even the Poocher car), you have to keep in mind that one might be better than another.

Here's a good example. At first glance this Santa Fe Bx-16 looks like it might be a good candidate for a conversion (ignoring for a moment that Westerfield has a perfect [model](#) of this car available). And it might be, if you use the right base model. And in this specific context the best base model to start with isn't an Accurail 1800, but the old-tooling Roundhouse boxcar. That model is closer to the ATSF car's basic dimensions, is easier to modify (especially shortening and lowering it to closer match prototype dimensions), and overall is just a better fit.



Richard Hendrickson collection

So pay close attention to what cars you need, dig through the ORER listings, hunt down as many photos as you can possibly find, and get modeling!

This installment concludes my series on these new Accurail boxcars. I hope everyone has found it to be as informative as I have! These models really have been sorely needed in HO scale for far too long, and I'm grateful to Dennis Storzek and the rest of the Accurail family for taking a chance on producing these new models. I'd also like to thank Eric Hansmann for hosting and advertising these pieces on his blog. And finally, special thanks to my "Early Rail Pirate Crew" for editing my work, offering suggestions and supporting data, and generally keeping me well grounded.

*Happy modeling!
Ray Breyer*