

The Long Island Railroad Milk Car Mystery **SOLVED**

WALTER WOHLEKING



Standard Steel Car Co. builder's photo from the D. K. Retterer Collection

TWO YEARS AGO, the Summer, 2007 issue of the *Cannon Ball* displayed this picture beneath the heading, “Know anything about this oddball?” A lot has been discovered since then, and the way in which the information was gained is a lesson in railroad research that might encourage others to learn about their favorite cars. Since the author of this article also placed the picture, its heading and its caption in that 2007 *Cannon Ball*, thus stirring the pot, it’s only appropriate that he be responsible for getting to the bottom of things. The story of how that came about and the contributions generously made by members of the model railroading community provides a lesson in railroad research. The knowledge gained allows a pretty good picture to be painted of the car’s origin, characteristics, length of service, and other useful things. Happily, there is a solid means of creating a very accurate model of the prototype. Here, then, is the story.

The original caption under the photo referred to car #3000 as a “mystery milk car” and read, “Long Island Railroad milk car no. 3000 appears to be a reefer with the distinctive fishbelly underframe found on many cars built in the first decade of the 20th century. But is it a reefer assigned to milk service, or does it have some of the special characteristics associated with cars designed particularly for milk service? ...Email or write the editor, if you have any information...”

While that caption was constructive, in that it solicited information that generated responses, at least some of it might have been confusing. Being a fan of early 20th century railroads, I knew I had seen the “fishbelly underframe” in photos taken in the first quarter of the 20th century, which had appeared in car builder dictionaries, as part of a car builder photo collection, or in some publication about the period. What I didn’t realize was that I already had more information about that feature, as well as the type of car itself, close at hand, which we’ll come to later on.

What was probably confusing to someone reading the caption was the question of whether the car was designed and constructed as a milk car or was, rather, a conventional refrigerator car *assigned* to milk service. What’s the difference?

LIRR MILK CAR 3000—WHAT IT WASN'T

First of all, the car wasn’t a refrigerator car at all, and few milk cars ever were. Chances are that most people’s frame of reference for a milk car is the General American Pfaudler car, examples of which ran on the Long Island Railroad as shown below.

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Bulk milk tank cars on the LIRR built by General American Pfaudler in 1928

Sheffield Farms publicity photo from Carstens Publications' *Electric Heritage of the Long Island Rail Road: 1905-1975* by Ron Ziel with John Krause

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Although the picture is of rolling stock that strongly resemble express refrigerator cars, the mention of Pfaudler, as well as the “milk in glass lined tank cars” phrase on the letterboards, is a dead give away to the fact that they were actually tank cars housed within a wood sheathed exterior. Pfaudler was primarily a builder of glass-lined tanks for the brewing industry. On page 25 of the *Model Railroader's Guide to Industries Along the Tracks 2* (Kalmbach Publishing Co., 2006) author Jeff Wilson notes that in 1922 General American Tank Car Co. built three such cars for the Wieland Dairy Co. of Chicago. The May, 1925 Official Railway Equipment Registry shows General American tank cars numbered 1–3 and carrying W.D.X. reporting marks assigned to the Weiland (sic) Dairy Co. The configuration was successful enough to warrant the formation of the General American Pfaudler Company in 1923 to produce more of the cars, and deliveries of bulk milk tankers by that partnership began in earnest in the mid-to-late 1920s in response to a rapidly growing market for milk and milk by-products.

With few exceptions, (the Borden “butterdish” car being one) bulk milk tankers were of the *dual tanks within a house car superstructure* form. In the past HO scale models of these cars have been available in brass and plastic. Roundhouse and Walthers currently offer well detailed, ready-to-run versions as shown below. Lastly, numerous articles have been written about kitbashing or scratchbuilding tank and other milk cars, as listed in the bibliography at the end of this article.



HO scale General American Pfaudler bulk milk tank cars

40 ft. G.P.E.X. #756 — Roundhouse item 84633

53 ft. G.P.E.X. #899 — Walthers item 631- 5463

But Long Island Railroad milk car 3000 was not a bulk milk tanker, into which milk was pumped for transport to a milk processor, where it would be turned into bottled milk, cheese, butter, and other products. It was not, because, among other things, it was built in 1917, five years before General American Pfaudler’s beer-tanks-for-milk brainstorm became a reality. No, LIRR 3000 was another, more common type of milk car with roots going back to the mid 19th century, when Thomas Selleck, station agent at Chester, an obscure village on the New York & Erie, induced the farmers of Orange County to increase their market reach by shipping milk to New York City by train. LIRR 3000 was a *can* car.

CAN CARS

Before bulk milk cars, and afterward, as well, there were can cars. These cars transported milk in those ubiquitous 40 gallon milk cans that were used to move milk all the way from its origin on the farm to its ultimate processing destination.

In the Midwest from the 1920s through the 1950s, it was not uncommon for non-dairy farmers with milk cows to run their milk through a small, hand cranked or electrically driven centrifuge called a cream separator. This would result in two products: cream, which was sold for cash to a creamery to be made into butter, and skim milk, which was often fed to the farmer’s hogs.

In most cases, however, dairy farmers in the northeast and elsewhere wanted to sell the entire product. The first step in the process was for the farmer to transport his fresh, raw milk to a milk consolidation facility. These were of various configurations and given any number of names from “milk station” to “creamery” and even “dairy”, depending on what they ultimately did with the raw milk. But rather than getting wrapped around an axle about terminology, in this article I’d like to just stick to a general summary of what had to be done with the raw milk and what the railroad’s function in moving it from place to place might have been.

Throughout any discussion of the milk business and the railroad’s part in it, time and temperature, those two things that are milk’s main nemeses, must be borne in mind. Raw needs to be gotten from farm to the place where it finally gets turned into a retail product in a nominally cool state as quickly as possible. This is why, though they weren’t reefers, almost all milk cars were insulated, and this is why many of them were equipped for running in passenger consists.

Getting back to the farmer, he’s milked his cows and he now needs to do something with the raw milk. If his farm happens to be located next to a facility that processes milk and bottles it for retail sale, he could most likely just cart it over there and be done with it, picking up his emptied cans when he brings over the next day’s output and getting paid directly from the bottler. But that is an unlikely scenario, because final processors, such as bottlers, were most often located near their markets in population centers, where farmers were not. Typical of this was the Sealtest Milk Company, whose large bottling plant visible to train riders passing through Jamaica, Queens, was far from any farm.

The 1920s and before were times when many farmers still moved things by horse and wagon. The delivery point for a farmer’s raw milk would have to be a relatively short time away to keep the time nemesis at bay. This would also control temperature, because the next stop for a farmer’s product was usually better equipped to provide a cool environment for the raw milk than could the farmer himself. This delivery point was what I referred to earlier as a milk consolidation facility. Milk station, creamery, whatever, it took in raw milk from area farmers, graded it, weighed it to determine what a farmer would be paid, and combined together similarly graded milk from all the farmers for subsequent delivery to the next stop on the way to retail distribution. It also cleaned all incoming milk cans (which carried unique owner IDs) and returned them to the farmers when they brought in the next day’s raw milk. Thus, the farmer sold his product to the consolidator and was paid for it by the consolidator, a very local business transaction.

Transport from the farm to the milk consolidation facility would either be entirely by the farmer using a horse and wagon or, perhaps later, a truck, or if the distance demanded it, by the farmer to the railroad and thence to the consolidator. Evidence of the latter is available in countless pictures of milk cans on depot platforms in rural areas of the country. The milk consolidator would then fill

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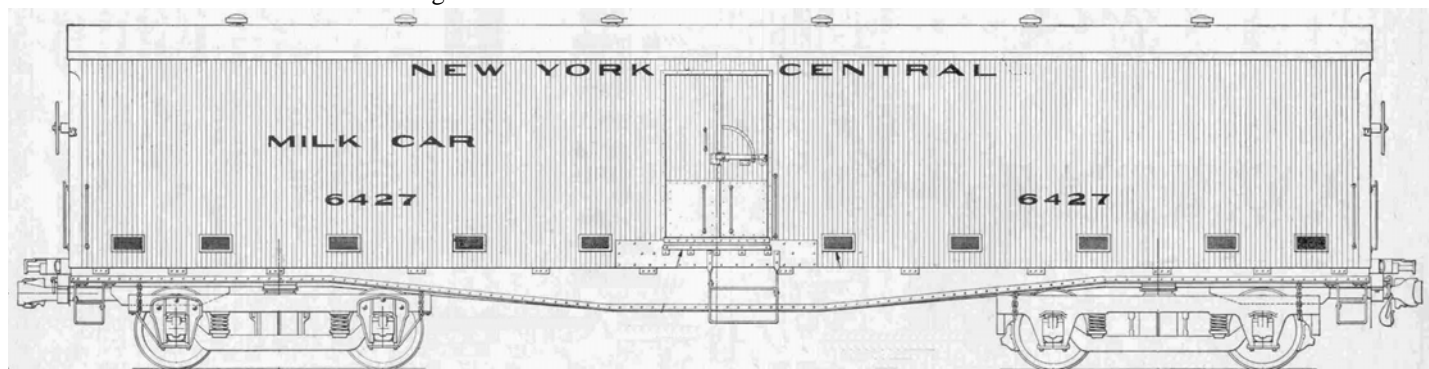
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its own 40 gallon cans with the combined milk and ship it to the next stop in the processing chain, which was usually the bottler. This was normally be done by rail, because it offered the best combination of time and temperature control.

For this, the railroads used can cars until market growth led to the development of the milk tank cars mentioned earlier. Can cars came in far more configurations than did tank cars. Early on cans were carried in baggage or combination cars. But the lack of insulation and the water produced from the melting ice that was spread around in contact with the cans to keep them cool, was a source of damage to baggage and express packages also carried in the car. The design of milk can cars, therefore, generally evolved into what was essentially a cross between a refrigerator car and a box car. Like a reefer, they were insulated and had well-sealed plug doors. Unlike a reefer, however, they had no ice bunkers or hatches. Most of the time milk cans would be set on the floor and ice scattered around to keep things cool. Often they rode on passenger trucks, and because they were usually carried as head end equipment, they had passenger steam and signal lines, in addition to the normal brake line. Arched roofs were not uncommon.



Occasionally a railroad made a modification to this configuration to address some undesirable or troublesome characteristic of the basic design, such as facilitating the removal of accumulated water from melting ice, or improving air circulation within the car as shown below in the J.H. Geissel drawing of a New York Central milk can car.



LIRR MILK CAR 3000 — WHAT IT WAS

The first clue to the identity of the LIRR “mystery” milk car came on July 24th, 2007, from of all places, Sycamore, Illinois. It was an email in response to my request to contact “the editor, if you have any information about this mystery milk car”, and it came from transplanted former Sunrise Trail Division president, Bill Lorence, Master Model Railroader 45 and lifetime NMRA member. Bill’s response appeared in the Fall, 2007 *Cannon Ball* Mailbag. What follows is a log of the communications and events, beginning with Bill’s email, which ultimately led to the identity of Long Island Railroad milk car 3000.

July 24th 2007 email Bill Lorence to Walter Wohleking

My 1926 OER shows 15 milk cars numbered 3000 to 3014 in the [LIRR] "passenger car" listing. They are not shown in the December 1930 OER. It looks like a PRR RF class reefer. Al Westerfield might be able to help. He has a very extensive PRR library.

July 28th 2007 email Walter Wohleking to Bill Lorence — cc to Al Westerfield

...As a result of your email suggestion that I look to Al Westerfield for more info, I got out my yet to be assembled Westerfield XL boxcar kit, which includes a terrific history of the XL series, including the RF and XM variations in all their original glory plus later versions modernized with safety appliances. I think I'm going to take that info and anything else I can pick up along the way and do a piece in the Cannon Ball about the car ... I also think that a good participation clinic could be developed around the appropriate Westerfield model and extended railroad roman LIRR decals from Champ or someone else...

August 13th 2007 email Walter Wohleking to Al Westerfield

RE the LIRR milk car, I'll try to work it out using the one-piece body (in the event I move ahead with the participation clinic, for which I'd want to use readily available kits). If I'm reading (seeing?) the catalog photos right, it appears that none of the reefers (RFs) have the standing seam roof, while the 1350+ boxcars do. Otherwise, I might suggest starting with a reefer and shaving off the ice hatches (providing the side ladders are separately added pieces and not cast on). Using the 1350 kit, however, an approach might be to try to shave off the boxcar door related items and replace them with reefer hardware, which I'm pretty sure is commercially available. If I screwed that up or couldn't scribe the sides nicely where the shaving took place, I could try cutting the sides away and putting in scratchbuilt ones. Does any of that sound practical?

August 13th 2007 email Al Westerfield to Walter Wohleking

The [prototype] milk car has a standing seam flexible metal roof. It is in fact a post 1911 box car with reefer doors. Your best bet would be to start with a flat kit #1350 and scratch build the sides. I don't know if we have any molds to do this kit left as we've converted it to a one-piece body.

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August 14th 2007 email Al Westerfield to Walter Wohleking

...Upon checking I find that kit 2750 RF reefer has a metal roof. It's a flat kit and the hatches could be filled in and mostly hidden by end walks.

August 29th 2007 received kit 2750 including the following related history of the class

The RF class was built on the same underframe and with the same dimensions as the XL box car. About 2,800 were built beginning in 1906 for PRR and PL [Pennsylvania Lines] with a number of billboards. The XM class was also produced, identical to RF in appearance but without ice bunkers. When the cars were upgraded in the 'teens they were given safety appliances and steel roofs...

June 8th 2009 email Walter Wohleking to Steve Lynch — cc to Al Westerfield

After spending the Summer of 2007:

1. stealing the LIRR milk car pic from your website and giving it the "Mystery Milk Car" moniker for the Summer 2007 issue of the STDiv's newsletter, the "Cannon Ball";
2. bugging the always accomodating Al Westerfield about PRR XL/XM/RF series house cars (the LIRR car appears to be an XM insulated boxcar — roughly a cross between an XL class boxcar and an RF class reefer, having reefer sides, but a hatchless, box-car roof); and
3. ultimately acquiring the Westerfield XL/XLC/RF kit closest to the LIRR configuration;

I'm finally getting around to doing something about modeling the car... and perhaps putting a participation clinic together for one of the STDiv meets, so that local LIRR fanatics can build a car from a Westerfield kit. At least no one can accuse me of rushing things.

Before starting, however, I need to pick your brain (or more appropriately, perhaps, your eyeballs) for some additional information, which is important to better understand a number of things about the car. I think that, somewhere along the way two years ago, you told me you had no further information other than what the picture might show. If you do have other sources, I'd like to be able to access them. If not, but you have access to the photo itself or to a scanned file of it that is of higher resolution than what appears on your website (which I believe is 300 dpi), it would be helpful if you could shed light on the following things:

1. What the capacity of the car is in cubic feet. I'm unable to read it from the picture.
2. Who the builder is (i.e. what does the lettering adjacent to the lowest grab iron say?)
3. While the roadname on the letterboard appears to be extended railroad roman and the number, 3000, appears to be executed in a sans serif typeface, all other markings appear have serifs. Is this true?
4. And last, but most important, is it true, as the picture seems to show, that the area along the side of the car between the roof edge and the top edge of the letterboard is free of rivets or similar fasteners?

I'll be happy to tell you why any of this is important in a subsequent email, should you wish to know.

June 8th 2009 email Walter Wohleking to Al Westerfield

...Two summers ago we communicated via email and a phone call or two about modeling the Long Island Railroad 3000-3014 series milk cars. A picture of the car appeared in that summer's issue of the Sunrise Trail Division's newsletter, the "Cannon Ball", after being unapologetically pilfered from Steve Lynch's wonderful, LIRR related website by the newsletter's blatantly underhanded and sneaky editor at that time, who happened to be me. (For your information and convenience, I've seen fit to repeat my shiftless behavior by yet again copying the picture, this time to attach it hereon, should you wish to refer to it.)

My idea was to build a model of the car, using one of your 1300 or 2700 kits, not only for my own enjoyment, but possibly as the basis for... a "Build an LIRR Milk Car" participation clinic for the local NMRA Division. After what can only be regarded as a slothful two years, I'm finally getting to the project. My question for you has to do with the roof. You may or may not remember that, based on the "XL/XLC/RF Variations" data and "PRR Fishbelly House Car" assembly instructions from a 1301 kit purchased earlier, I had concluded that the LIRR milk car could best be modeled by any of the 2700 series RFs with a 1374 or 1384 XL hatchless steel roof. Unfortunately no kit came with that combination and you suggested using a 2750 kit, which I'd modify by filling in the hatch openings and covering them with roof walks.

As I went about cleaning flash off the parts, I noticed that the roof edge contained rivets (or some other similarly appearing fastener) that appeared to be absent on the prototype photo. I've asked Steve Lynch via email (cc to you) for some additional information, which might be gleaned from the actual photo or a higher resolution scan, and a question about the rivets is included. The 2750 series of kits utilize the "2784 RF, Steel" roof. I used my DVD Catalog to look at assembled photos of each of the 1300 and 2700 series kits having a steel roof. The rivets are very noticeable on all except kits 1309 and 1319, which are not quite as clear, but which also use a roof the data sheets refer to as "1374 Roof, Steel, Original". In re-reading the notes, I noticed reference to a "Murphy flexible metal roof that became standard on the XL in mid-1909" and a "metal roof specified by revised blueprint in 1911". Another reference to a metal roof was made in connection with January 16, 1916 instructions to replace leaky roofs on RF cars with a "galvanized iron outside roof of the XL type". Not being a Murphy roof maven, I'm a bit confused. Are these all the same type of roof? If so, why might fasteners show on some cars, but not on others? It will be relatively easy to peel the rivets off the edge of the roof casting if they don't belong, but I'd like to be sure I'm not doing something I'll be sorry for later on. Is there anything you can tell me that might make me a little less dumb...

June 8th 2009 email Al Westerfield to Walter Wohleking

The builders photo is from the Keith Retterer Standard Steel Car collection. The details show the car was built between 1911 and 1916 (the last year any XLs were built). I have the photo but can't locate it that might show the lot number and date. The roof appears to be a Murphy flexible metal roof but without the stays on the edge...

Therefore, you can just file them off the model roof. However, I can see that it is difficult to hide the roof hatch openings. I just checked and I have a box car roof that I can send you to make things easier.

June 13th 2009 email Walter Wohleking to NMRA Kalmbach Memorial Library

Last week I spoke on the phone with someone in the Kalmbach Library about a project I've undertaken regarding Long Island RR

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(LIRR) milk cars nos. 3000-3014. I asked that information be obtained from certain Official Railway Equipment Registers (ORERs) resident in the Kalmbach Memorial Library. Subsequently, I realized that my original request had omitted something, and I thought it best to send this email to better delineate the project's scope and what it is I need.

Briefly, the nature of the project is to trace the history of the aforementioned milk cars for the purposes of preparing an article for publication and building a model of one. Attached for your information you'll find a photo of the first car in the series. I know the cars were built by the Standard Steel Car Co. of Butler, Pennsylvania, and I've already taken steps to obtain more detailed information about their design and construction. I have obtained the materials needed to create an accurate model of the car. I have access to certain ORERs that roughly indicate the service period of the cars. (The cars are listed as "Passenger Equipment" on the second page of the LIRR portion of the ORER, as shown on the attached excerpt.) What I know in that regard I've learned from four specific ORERs that I have access to. They show the following:

Per the January, 1915 ORER, milk cars 3000-3014 WERE NOT yet in service on the LIRR.

Per the October, 1919 ORER and the May, 1925 ORER, milk cars 3000-3014 WERE in service on the LIRR.

Per the December, 1930 ORER, milk cars 3000-3014 WERE NO LONGER in service on the LIRR.

Based on the above, therefore, the cars went into service somewhere between February, 1915 and September, 1919, and were withdrawn from service somewhere between June, 1925 and November, 1930. What I'd like to be able to do, with your assistance, is to better pinpoint the beginning and end dates of the cars' service period on the LIRR using ORERs in the Kalmbach Library's possession. Accordingly, would you please undertake the following tasks:

1. Find the earliest ORER in the Kalmbach Memorial Library that shows LIRR milk cars 3000-3014 in service. Per the above, it will fall somewhere between February, 1915 and September, 1919. Copy the relevant page and send it to me. (I'd prefer a scanned, uncompressed JPG file that you can email me, but a xeroxed copy sent via surface mail is OK as well.)

2. So that I might get some idea of the makeup of the LIRR milk car fleet just prior to introduction of cars 3000-3014, please provide me with a scan or copy of the LIRR "Passenger Equipment" page of the first ORER in the Library's possession PRIOR to the ORER described in step 1 above.

3. Find the latest ORER in the Kalmbach Library that shows LIRR milk cars 3000-3014 still in service. Per the above, it will fall somewhere between June, 1925 and November, 1930. Scan or copy the relevant page and send it to me.

4. So that I might get some idea of the makeup of the LIRR milk car fleet just after removal of cars 3000-3014, please provide me with a scan or copy of the LIRR "Passenger Equipment" page of the next ORER in the Library's possession AFTER the ORER described in step 3 above.

5. Please provide the name of the Kalmbach Library staff member who carried out the above tasks, so that I may properly acknowledge effort other than mine in anything I might publish regarding this project...

June 15th 2009 surface mail D. K. (Keith) Retterer to Walter Wohleking

I found the photo you requested. This is the Long Island Railroad milk car built by Standard Steel Car Company. It was built in May, 1917. There was just a small line on the back of the photo indicating that 15 cars were built in this lot. I wish I had more info for you. The photo enclosed is a little better than the photocopy in your letter. The original photo was not great to begin with. The harsh contrast is in the original. That really makes it impossible to see any detail in the trucks. I hear from friends in Pennsylvania that the drawings for the SSCC cars can be found at the P A State Archives in Harrisburg, P A. It may be worth a call or letter to see if they have any data on this particular car...Good luck with your project!

June 16th 2009 email Brent Lambert, NMRA Kalmbach Memorial Library Director, to Walter Wohleking

Thank you for your follow-up email. I spoke with you last week about the ORER listings for LIRR milk cars 3000-3014, and have found the information that you requested (as best I could with our existing collection of registers). I discovered the following:

1) The latest ORER prior to 1919 that did not list the LIRR milk cars was February of 1916

2) The first ORER prior to 1919 that did list the LIRR milk cars was June of 1917

* As you can see, we don't have a complete collection between 1916 and 1917

3) The latest ORER after 1925 that did list the LIRR milk cars was May of 1928

4) The first ORER after 1925 that did not list the LIRR milk cars was January of 1929

Again, we do not have all volumes from 1928. According to our records, the Railroad Museum of Pennsylvania is purported to have a complete collection of ORERs. So, you also may want to consider contacting them in order to further pinpoint the dates in question. They can be reached at Railroad Museum of Pennsylvania, P.O. Box 15, Strasburg, PA 17579, and by phone at 717-687-8628.

CONCLUSIONS

LIRR Mystery milk cars 3000-3014 were PRR class Xm box cars built by the Standard Steel Car Co. of Butler, Pennsylvania, in May, 1917 and placed in service on the Long Island Railroad shortly thereafter. According to Official Railway Equipment Registers (ORERs) of the day, they had a capacity of 1,968 cu ft and 100,000 lbs. The LIRR ORER listings do not provide length or width data for the cars, but the May, 1925 ORER provides the following data for a series of PRR Xm fully insulated box cars:

Markings and Kind of Cars:	Steel Underframe, Fully Insulated
Outside Length:	38'9"
Outside Width at Eaves:	9'11"
Outside Height from Rail to Top of Running Board:	12'8¼"
Side Doors Width:	4'2"
Side Doors Height:	6'1¾"
Volumetric Clear Capacity—Bulkheads Collapsed:	2043 cu. ft. level full (this is within 4% of the LIRR ORER listing)
Capacity by Weight:	100,000 lbs

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The last ORER available to me, that of August, 1928, shows the original fifteen cars still in service. The first ORER available from the NMRA Kalmbach Memorial Library to show the cars no longer in service is January, 1929, meaning the cars were removed from the LIRR roster sometime between September and December of 1929.

QUESTIONS & PRESUMPTIONS

In the builder's photo, the typeface on the letterboard appears to be extended railroad roman similar to that used on LIRR passenger equipment of the period. Yet the car contains no steam or signal lines, which would normally appear on passenger equipment. In addition, though hard to make out, the trucks do not appear to be passenger trucks.

Consequently, my presumption is that the car either ran in a milk car-only consist or was placed at the rear of passenger equipment, so that pass-through steam and signal lines weren't necessary. The lack of passenger trucks could signify that the speeds reached weren't high enough to warrant them, since the distances LIRR trains had to cover were short enough to allow suitably rapid transport of milk without any express service. Since the car carries passenger lettering, I presume it was painted tuscan red.

Though there is no evidence to support this, the cars probably went out of service when trucks took over most of the business.

BUILDING A MODEL

The best starting point for a model is a Westerfield 2750 modernized RF reefer or any other in the 275+ series (the difference is usually in the decals supplied—2750 is undecorated). Arch bar trucks, such as Kadee 501, will be needed, and a Champ Decals PH-48 Long Island Railroad Passenger Bronze Gold lettering set will take care of the car's letterboard. I am planning an article on kitbashing the Westerfield kit into LIRR 3000. I recommend that you not hold your breath, however, if the amount of time it took me to put this bit of research and writing together is any indication.

ACKNOWLEDGEMENTS

My thanks go out to all those who so willingly and generously gave of themselves and the valuable information they possessed. Many of them are listed in the communications and events logs. I hope those unseen individuals who aren't will somehow know how much I appreciate what they provided. But, then, that's the model railroading community for you. And I'm sure glad to be a member.

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