

Burlington Route Historical Society

FREIGHT CAR DATA SHEET

Burlington
Route

CB&Q 55-ton Twin Hoppers

Coal is a commodity carried in substantial quantities by virtually every railroad since locomotives began utilizing the fuel in the 1850's. Gondolas, with or without drop doors in the bottom or sides, and to a lesser extent, boxcars (also with or without drop doors) were the standard means of transporting coal by rail until late in the 19th Century, when the hopper car was developed. Instead of vertical ends, hopper cars had end sheets which sloped downward (at an angle of about 30 degrees) to unloading doors or gates at the bottom of the hopper formed by the carbody, thus making the cars self-clearing. To make up for the capacity lost to the slope sheets, taller bodies were employed on hopper cars than on gondolas of comparable cubic capacity. Single-hopper cars came first, followed shortly by two-pocket cars—twin hoppers—both types being of all-wooden construction.

The Q had a number of similar 30-ton-capacity "self-clearing coal cars"—actually single-hopper cars—in service by early in the 20th Century and acquired its first twin hoppers from American Car & Foundry in 1901. These 247 outside-braced wooden cars (numbered 88700-88946) were 33 feet long over end sills, 31 feet 8 inches long inside (at the top of the carbody), 9 feet wide over side sills, and had a rated capacity of 40 tons. They were surprisingly similar in appearance to composite hoppers built more than 40 years later.

But the Q still preferred drop-bottom gondolas for coal service, particularly after the first all-steel versions were purchased in 1903, and it was 1926 before the Burlington bought another hopper car, by which time all the wooden hoppers had been retired. Subsidiary Colorado & Southern did acquire 300 USRA-design 55-ton steel twin hoppers in 1919 for coal service, but the Q instead got more composite drop-bottom gons from the USRA.

In 1926, AC&F delivered 500 all-steel, 55-ton-capacity twin hoppers to the Q, numbered 190000-190499. These cars were of a design developed by AC&F during the early Twenties, with seven vertical

outside posts of hat-section steel, and no exterior or interior diagonal bracing. Compared to the USRA 55-ton hopper, the new Q class HT-1 cars were 3 feet 9 inches longer, at 34 feet 3 inches inside, 34 feet 3½ inches over end sills, and consequently had a cubic capacity of 2,078 cubic feet, compared to the 1,880 cubic feet of the USRA cars. Unlike the USRA hoppers, which rode on Andrews cast steel trucks, the new Q cars employed cast steel trucks of the Dalman design. The first 250 cars were equipped with Perfection lever-type hand brakes, while the other 250—and all subsequent Q twin hoppers—had Ajax brake wheels.

One unusual—possibly even unique—feature of the HT-1's (and, again, all subsequent Q twins) was the side sheets: Instead of being fabricated from full-height steel sheeting, they were made up of two partial-height sheets, and consequently had a riveted horizontal seam part way up the sides and running the length of the car.

Satisfied with the performance of the hoppers, which unlike drop-bottom gondolas, could unload their cargo between the rails rather than to either side, the Q undertook a systematic program to acquire more of the hoppers in succeeding years. Rather than buying them from AC&F or other carbuilders, however, the railroad instead built nearly identical cars at its Galesburg car shop, which became known as the steel car shop as it came to specialize in all-steel hoppers and gons. In 1927-28, 500 class HT-2 cars numbered 190500-190999 were turned out, followed by 500 HT-3's (191000-191499) in 1928 and 250 HT-4's (191500-191749) in 1929. Instead of the Dalman trucks of the original HT-1's, these additional cars rode on Andrews trucks. HT-2 190999 was experimentally fitted with Wine hopper door locks, and car 190521 was built with smaller hopper openings in an unsuccessful attempt to control the flow of coal from the car. And the 250 HT-4's became the first Q hoppers with interior crosswise diagonal braces at the center of the car, where the two hoppers peaked.



CB&Q HT-1 190137, one of the original 1926 AC&F cars, displays a post-1937 paint scheme in this 1940's view at Omaha. The horizontal seam in the side panels is readily evident.—Bernard Corbin photo, BRHS collection

A Galesburg copy of one of the AC&F cars, HT-2 190675 was turned out in January 1928 and is seen here at Eola, Illinois, on Jan. 25, 1943, in paint—including "Everywhere West" stencilling—applied at Galesburg during May 1942.—CB&Q photo, Rod Masterson collection.



No additional hoppers were added to the fleet until after the Depression, in 1936. By that time, the Association of American Railroads had adopted a recommended standard for a 50-ton twin hopper. This was an offset-side car, however, and the Q preferred to stick with its 55-ton outside post design. The railroad did make the logical, economical concession of purchasing AAR standard center sills for all twin hoppers it built thereafter. One other readily evident, if minor, design change on the new cars was the addition of triangular gusset plates and towing eyes attached to the side sill and the vertical posts at the end of each side. And trucks of either the AAR cast steel design (the so-called Bettendorf truck) or the similar National Type B variety (with its distinctive pair of circular holes in the sideframe casting) were employed on 1936 and later cars.

A total of 600 class HT-5 cars were built at Galesburg to the revised design: cars 192000-192249 in 1936, 192250-192499 in 1937 and 192500-192599 in 1938. These were followed by 450 HT-5A's in 1940



Ninth of the "new design HT-5's, Q 192008 posed fresh from the steel car shop at Galesburg in December 1936. These were the final cars delivered without the "Everywhere West" stencilling.—CB&Q photo, Rod Masterson collection

(192600-192849) and 1941 (192850-193049). After a wartime intermission when only composite hoppers (covered in a separate data sheet) were produced because of steel shortages, HT-5A construction resumed in 1945, with 100 more (cars 193100-193199) turned out by the Havelock shop. Galesburg's steel car shop was permanently closed in 1943, during the World War II steel and manpower shortages, and all construction and repair work consolidated at Havelock. Minor design changes resulted in class HT-5B, with 650 turned out by Havelock in 1945 (189000-189649) and another 350 in 1946 (189650-189999).

One last group of twin hoppers was built at Havelock in late 1947 and 1948, shortly before production was switched over to 70-ton triple hoppers. The final group of twins was the largest single lot built: 1,000 HT-5C's numbered 188000-188999.

Only a very few modifications were made to the twin hoppers through the years, most of them to members of the various HT-5 classes. First, during the wartime steel shortages, and as an experi-



The first HT-5A, Q 192600, at Galesburg in August 1940 with the "Everywhere West" stencilling which by then was standard. This car and 192008 at left both ride on National Type B trucks.—CB&Q photo, Rod Masterson collection

Broadside views of the first two postwar groups of HT-5B's, both taken at the Havelock shop where they were built: 189011 on April 20, 1945, and 189932 on Dec. 11, 1946.—CB&Q photos, Rod Masterson collection



Left side and B end views of Q HT-5C 188000, the first member of the last and largest group of twin hoppers, turned out by Havelock in late 1947 and early 1948. As with all HT-5's, a riveted horizontal seam runs the length of the car sides. Havelock, Dec. 17, 1947.—CB&Q photos, Rod Masterson collection



ment in reducing car weight, aluminum side and end sheets and floor panels were substituted for the steel sheeting of HT-2 190854 in August 1944, and hollow-cored axles replaced the solid steel axles of the car's wheelsets. The aluminum was left unpainted, and the car was thereafter lettered in black. The experiment trimmed the car's weight from 44,500 pounds to 36,800 pounds but was never repeated. Next, 5-inch nozzles were applied to a total of 10 HT-5A's and 15 HT-5B's in 1948. In 1949, year-old HT-5C's 188130, 188309, 188395, 188962 and 188149 were outfitted with Chrysler FR-5D trucks (another variation of the AAR design) and inexplicably renumbered 212160, 212161, 212163, 212165 and 212166, respectively, in the company service number series. Then, in May 1953, a variety of vertical-ribbed and panel side sheets was applied to the center side sections of HT-5's 192025, 192102, 192118, 192420 and 192429. But similar investment in more of the aging cars was not deemed worthwhile. Lastly, in March 1958, a nylon covering (presumably a tarp-like cover)

was experimentally applied to HT-5A 192969.

All 1,750 of the HT-1's through HT-4's were originally painted mineral red with white Roman lettering and white-on-black Burlington Route heralds. The 3,150 cars in the various HT-5 classes carried the same basic paint scheme, but with the addition of the script "Everywhere West" slogan in the center of both sides, beginning with the 1937 cars. When the Q adopted its new image paint schemes in 1958, the twin hoppers began to be repainted as they were shopped, with Chinese red bodies, black trucks, white block gothic stenciling, large white "Burlington" lettering on each side, and full-color Scotchlite heralds with "Everywhere West" beneath on one side and "Way of the Zephyrs" on the other side. From known photos, only 189000-series HT-5B's seem to have actually been repainted. The slogans were dropped from cars repainted after about 1963, but few if any of the twins were repainted after that time. By the mid-Sixties, when the Q began painting coal hoppers black,



HT-2 190854 was retrofitted with aluminum side, end and slope sheets at Havelock and photographed there on Aug. 11, 1944, upon completion of the work. Note that two-piece side panels were still utilized.—CB&Q photos, Rod Masterson collection

In May 1954, five of the HT-5's experimentally received corrugated or panel side sheets in the two central side sections on each side of the car. For modelers in HO scale, the panel sections of car 192429 are commercially available, but the two corrugated varieties would have to be fabricated from scratch.—CB&Q photos, Rod Masterson collection

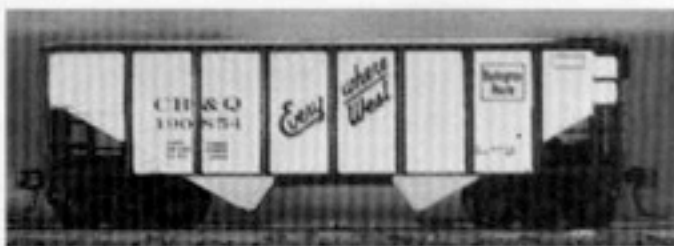


The 189000-series HT-5B's were extensively overhauled at Havelock in 1959 and thereafter wore the "new image" Chinese red paint scheme, including black trucks. Few other Q twin hoppers received the Chinese red scheme. Havelock, March 11, 1959.—CB&Q photo, Rod Masterson collection





All four Q twin hopper paint schemes appear on these detailed HO scale Athearn plastic models.—Models and photos by Rod Masterson



virtually all of the remaining twin hoppers had been withdrawn from coal service (replaced by larger cars), so none of the twins were ever painted black.

By the mid-Sixties, most of the remaining twins were used only in seasonal sugar beet service on Lines West, although some were leased to Missouri Portland Cement Company and used to haul limestone. Of the 4,900 steel twin hopper cars owned by the Q, just 2,680 were still on the roster at the start of 1969, all listed in poor condition and most scheduled for retirement when in need of shopping. Some 2,569 of the cars made it onto Burlington Northern's first list of equipment and were assigned numbers between 503500 and 507749, although few if any were actually repainted and renumbered.

Modeling the twin hoppers

Athearn in HO scale, Kadee in N scale, and MDC in G scale offer plastic models of seven-post twin hoppers that are dimensionally close to the Q cars and can be readily detailed to closely approximate the HT-5 series cars. Basically, the changes involve scribing the horizontal gusset between posts on both sides, adding the triangular gusset/towing eye at each corner of the sides, and removing ladder uprights from the left end of each side, substituting instead a long horizontal grabiron. The hand brake support posts aren't "right on," but they're close. Some extra work on the side sills at both ends of the car (instead of adding the triangular gusset) can create a passable replica of the earlier HT-1 through HT-4 cars. Paint the model mineral red (or Chinese red if you're modeling one of the many 189000-series HT-5B's that were repainted this way), decal us-

ing the accompanying photos as a guide, and add appropriate trucks. If you choose to model one of the first 250 HT-1's, Precision Scale makes a brass casting in HO, part 3567, that is close to the Perfection hand brake lever.

CB&Q 55-ton Twin Hoppers

Car Numbers	Qty.	Class	Truck No.	Builder	Date Built
190000-190499	500	HT-1	51	AC&F	1926
190500-190999	500	HT-2	48	Galesburg	1927-28
191000-191499	500	HT-3	48	Galesburg	1928
191500-191749	250	HT-4	48	Galesburg	1929
192000-192099	100	HT-5	56-A	Galesburg	1936
192100-192249	150	HT-5	55-A	Galesburg	1936-37
192250-192349	100	HT-5	56-A	Galesburg	1937
192350-192499	150	HT-5	55-A	Galesburg	1937
192500-192599	100	HT-5	58-B	Galesburg	1938
192600-192749	150	HT-5A	56-C	Galesburg	1940
192750-192849	100	HT-5A	58-B	Galesburg	1940
192850-193049	200	HT-5A	56-D	Galesburg	1941
193100-193199	100	HT-5A	90	Havelock	1945
189000-189649	650	HT-5B	90	Havelock	1945
189650-189999	350	HT-5B	90	Havelock	1946
188000-188999	1,000	HT-5C	67*	Havelock	1947-48

*Cars 188130, 188309, 188395, 188962 and 188149 equipped with No. 84 trucks, 10/49, and renumbered 212160, 212161, 212163, 212165 and 212166, respectively.

