

Carolina Conductor



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Preserving the Past Active in the Present Planning for the Future

Web Site: hubcityrrmuseum.org

Facebook: Carolina Railroad Heritage Association & Hub City RR Museum

Meeting Site:

Fountain Inn Presbyterian Church

307 North Main Street

Fountain Inn, SC 29644

Third Friday of the Month at 7:00 p.m.

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Articles can be submitted anytime.

C&O #1309

*This issue contains three articles about the
C&O/WMSR #1309 locomotive.*

History of the C&O #1309

Of all the strange plot twists in the story of steam's final years, one the most interesting is the Chesapeake & Ohio's decision in 1948 to buy 2-6-6-2s from Baldwin to shore up its operations in West Virginia coal country.

Think about that for a moment. That year, most American railroads were buying vast quantities of new diesels from Electro-Motive, Alco, and other manufacturers. Steam was clearly on the way out, no matter how well a New York Central poppet-valve Niagara or Norfolk & Western Y6b might perform.

Despite the tide of history, C&O was in a jam and needed power quickly. It served the mines with a big roster of Mallet compounds, some more than 35 years old, and they were wearing out quickly. But instead of opting for more of its modern 4-8-4 Greenbriers, 2-8-4

Kanawhas, or Alleghenies, the C&O stuck with a basic locomotive design that dated back to its H-1 2-6-6-2 of 1910.

What emerged was an order for 25 2-6-6-2s in what was the new H-6 class. The order was soon cut back to 10 engines after labor unrest in Pocahontas country depressed mine production. Those final Mallets, delivered in 1949 and numbered 1300-1309, would be the last steam locomotives Baldwin would ever build for a North American railroad.

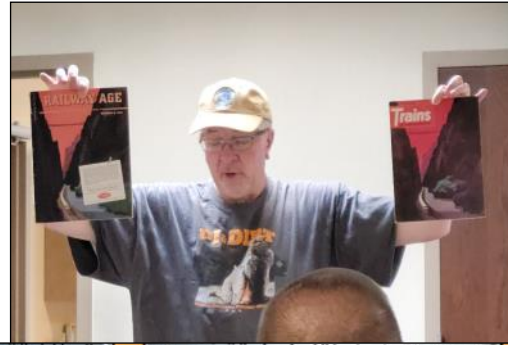
The story of these engines has currency because crews are hard at work bringing H-6 No. 1309 back to life for operation on the Western Maryland Scenic Railroad (WMSR). Based at Cumberland, Md., with a shop at nearby Ridgeley, W.Va., the tourist line acquired the 2-6-6-2 in



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Museum Happenings

Craig Myers gave a great program on railroad art. →



Track one in front of the museum was recently replaced with track removed from the Clemson bridge project.



↑ Touch-a-Truck Day brought out visitors who also enjoyed seeing trains,.

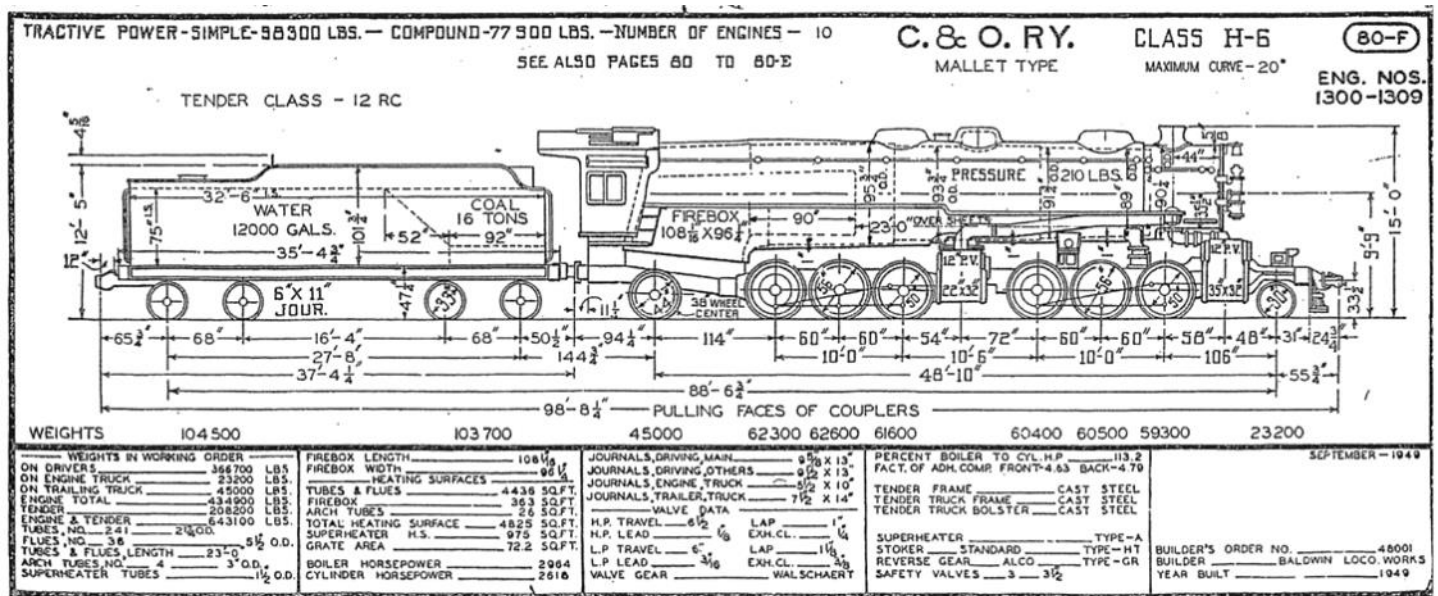
Two groups of visitors enjoyed learning about Spartanburg history and the caboose, →



Wanted—Articles for the Carolina Conductor

Submit an article of 200 words or more with some photos and captions and see them in print. Every one of us has some unique railroad experience that would make interesting reading for our membership. Your editor always needs more contributions of railway history and news.

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2014 after the locomotive spent decades at the B&O Railroad Museum in Baltimore. New as they were, the last C&O steam engines never got adequate maintenance, lengthening the list of work needed to bring 1309 back to life.

The prospect of 1309 in steam remains exciting. The H-6 class had a lot in common with earlier 2-6-6-2s on C&O, but the 1300s also had improvements you'd expect from postwar locomotives, including roller bearings and improved lubrication. Obsolete though they were on paper, they nonetheless were magnificent machines, in compound mode delivering as much as 77,900 pounds of tractive effort through their two sets of six 56-inch drivers.

As steam historian Ed King puts it, "These were superb engines, not possessing any superlatives in size or weight, but they made an excellent basic design even better."

Ed is a Norfolk & Western partisan, but he acknowledges that N&W's rival C&O really had something with its 2-6-6-2s. "N&W borrowed one of the H-2s for testing in 1911, and it ran circles around N&W's Y1 2-8-8-2, which was of modest size," Ed told me. "N&W obtained 15 duplicates of the H-2 in 1912 and amassed the world's second largest fleet, 190 engines, by 1918. These engines got N&W through World War I." Quite an endorsement, that.

Back to the H-6s of 1949. The new engines spent their short careers working out of the Peach Creek terminal on the Logan district. At first, the H-6s gave the

C&O all the reliable power it asked for, but even brand new Mallets couldn't ward off the legions of GP7s C&O began ordering in 1950 and '51; some of the 2-6-6-2s were retired as early as 1952, not even four years old. All were gone by 1957, with the 1308 eventually going to a park in Huntington, W.Va., and the 1309 to



#1309 on display at the B&O Baltimore Railroad Museum.

the B&O Museum. The 1308 is owned and maintained by the Collis P. Huntington Chapter, NRHS.

One might imagine what a spectacle the 1309 will create when it's back in service. For a hint of that, I consulted an expert, the late Eugene Huddleston, the dean of C&O historians and co-author of *C&O Power*, published by Al Stauffer in 1965. Gene was a long-time professor at Michigan State and died in 2011 at age 80.

Gene's book is full of facts and figures and photographs, but it also contains vivid accounts of his encounters with C&O steam. He recalls a visit to Logan in 1952, when he arranged a rendezvous with the Scar-

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let Shifter, a regular train working the Island Creek Mine No. 27, a location so far south on the C&O it might be considered N&W territory. He caught a bus out of Logan and arrived in time to find two H-6s taking water at a new wooden tank; photos from that day indicate the lead engine was 1309.

Images of Mallets merely tiptoeing around wouldn't do, so Huddleston managed to grab a ride out of town with an electrician who was leaving the mine. The driver dropped him off about halfway up the three-mile grade out of Scarlet. Gene takes it from there:

"Soon the doubleheader slowly canted into the curve, and with never a slip, twenty-four drivers under two big boilers produced sight and sound which photograph or tape record could never do justice to. Countless days since, the roar of twenty-four diesel cylinders has rebounded from the mountainside as two 2400 h.p. Alco road switchers in multiple operation have repeated the performance, but never again will this apotheosis of the steam locomotive in action occur."

"Apotheosis" is a pretty loaded word, but I don't doubt Gene's memory one bit. I'm sure those two 2-6-6-2s fairly ripped apart the Island Creek valley that fine day.

Steam Restoration 2010s

The years 2013 and 2014 witnessed some incredible announcements regarding steam locomotive restoration. First, in early 2013 word came that Norfolk & Western J Class #611 would return to operation. This was followed by the biggest announcement of all, Union Pacific's blockbuster move to restore 4-8-8-4 Big Boy #4014. Finally, in late summer of 2013 news broke that the Western Maryland Scenic Railroad (WSMR) was eyeing Chesapeake & Ohio 2-6-6-2 #1309 for overhaul and restoration. This was later confirmed during the following May. The big compound Mallet, built for coal service, will be the largest of its kind in operation and only the third such type currently under steam. The locomotive will be WMSR's primary power in excursion service.

Alas, the restoration of #1309 has not been the fast and efficient project of Union Pacific #4014, or even what the railroad had hoped. WMSR has dealt with setback after setback; after costs soared the railroad discovered a prominent employee stole twelve drive-

wheel journal boxes off the locomotive, totaling an incredible \$251,000. However, things are moving forward! The restoration is nearing completion as the big Mallet was test-fired by the railroad on June 29, 2020. She should be making her initial test runs soon.

The Mallet was an interesting steam design. Its name derives from the person who invented it, Anatole Mallet of Switzerland. The first example to enter service was Baltimore & Ohio 0-6-6-0 #2400. Also known as "Old Maude" the American Locomotive Company built the locomotive where it was employed in heavy drag service along the railroad's fabled grades of the West End. Most railroads came to dislike the Mallet which used compound expansion that many found too complicated to justify the advantages in fuel savings and tractive effort. However, a few major lines found use for them on more than just an experimental basis, notably the Norfolk & Western and Chesapeake & Ohio.

The C&O employed its first Mallets around 1910 with a 2-6-6-2-wheel arrangement (sometimes referred to as a Mallet Mogul), a few years after the B&O had proven the design's capabilities (during this era several railroads evaluated compound technology ranging from the Clinchfield to Great Northern). Like its northern neighbor the C&O operated a plethora of coal branches in the Mountain State as well as eastern Kentucky, many of which were riddled with stiff grades. As a result, these high adhesion brutes came in quite handy at moving heavy trains of black diamonds with tractive efforts near or above 70,000 pounds. The first to enter service was #1300 followed by #1301 (Alco manufactured both, the former at its Brooks plant and the latter in Schenectady).

These early compounds were light compared to later examples, weighing 200 tons compared to future variants that weighed 300 tons or more. In all, the C&O rostered 25 of these early Mallets numbered 1300-1324. They saw short careers on Chessie thanks to their small size and all were scrapped by 1935. They were followed by the beefier Class H-4's of 1912, which weighed 300 tons. A few years later a batch of what was listed as Class H-3 arrived that were even heavier than the H-4's with a tractive effort of 74,000 pounds. During 1919 and 1920 the C&O received batches of its Class H-5's and Class H-6's becoming the last new compounds to arrive on the railroad for

nearly 30 years.

The locomotives were numbered 1520-1539 (H-5) and 1475-1519 (H-6). While the railroad is said to have not particularly cared for its H-5's Chessie was quite happy with its initial H-6's, which performed exemplary in coal drag service offering tractive efforts of 70,000 pounds and weighing 330 tons. The C&O was so pleased with the H-6's that it went back for more following World War II. This move is incredible considering that steam was in its waning years, diesels had proved their superiority, and most roads were in the process of retiring and/or phasing out their fleets. Up until that time Alco had built the entirety of the railroad's 2-6-6-2 fleet. However, when it ordered more in 1948 Chessie tapped Baldwin.

The need for the locomotives was, again, in the transport of heavy coal trains. Due to the late era in which they were built the compounds featured some of the newest technologies available such as roller bearings and upgraded lubrication systems. The latest H-6's were modeled from the earlier H-6's and pulled from the H-3 and H-4 designs. As a result, they offered similar tractive efforts, weight, wheelbase, and driver sizes among other features. Initially, the C&O placed an order of 25 2-6-6-2s but would amend this to just ten, #1300-1309, following coal strikes in 1949 that saw production drop significantly and the need for more power was no longer needed. When outshopped that year #1309 earned the distinction as being Baldwin's last steam locomotive commercially produced for a U.S. railroad.

The batch of ten were immediately dispatched to the C&O's busy Peach Creek Terminal at Logan, West Virginia where they remained for the entirety of

their eight-year careers. As the 1950s wore on ever-larger batches of Electro-Motive GP7s and GP9s (the C&O's preferred choice of first-generation road-switchers) bumped steam from main line service, including the H-6's. The last 2-6-6-2, #1309, was retired in 1956 and spent several years in storage at the Peach Creek Roundhouse until it was acquired by the Baltimore & Ohio Railroad Museum in 1972. There it remained for 41 years until the summer of 2013 when the announcement was made that the Western Maryland Scenic Railroad was interested in restoring the big Mallet for use in excursion service.

A deal was eventually reached and on May 6, 2014, news broke that #1309 would be transferred to the WMSR for operation marking the third large steam locomotive in just over a year to begin full-scale restoration. Once under steam the compound will become WMSR's primary power for excursions, complementing the sturdy but underpowered #734 and working alongside the diesels on the property such as GP30's #501 and #502 (dressed as Western Maryland units). The locomotive should draw far greater attention to the WMSR as it will be the largest of its kind operating on an eastern tourist railroad. The hope was to have #1309 back under steam for the 2016 operating season. Alas, funding shortfalls have constantly pushed back its completion date and the locomotive currently sits in a state of reconstruction at the railroad's shops in Ridgeley, West Virginia. If the necessary funds ever materialize the Mallet will be completed although it is unknown when that might be.

The #1309 at WMSR

Western Maryland Scenic Railroad #1309, also known as *Maryland Thunder*, is a compound articulated class "H-6" "Mallet" type steam locomotive with a 2-6-6-2 wheel arrangement. It was originally built by the Baldwin Locomotive Works in 1949 for the Chesapeake and Ohio Railway (C&O) where it



#1309 waiting for its next assignment.



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pulled coal trains until its retirement in 1956. It was the last steam locomotive built by Baldwin. In 1957, it was moved to the Baltimore & Ohio Railroad (B&O) Museum for static display. In 2014, it was purchased by the Western Maryland Scenic Railroad (WMSR), who undertook a multi-year effort to restore it to operating condition. The restoration was completed on December 31, 2020, and the locomotive entered tourist excursion service for the WMSR on December 17, 2021.

The Western Maryland's restoration, which began in July 2014, included returning all parts to meet or exceed original specifications. The railroad claimed the engine would be "better and more reliable than it was in 1949". The engine and tender were disassembled and then rebuilt with new parts where necessary. The



Boiler restoration at the Ridgley shops.

engine's cab and floors were among the pieces replaced.

In April 2016, Western Maryland Scenic Railroad No. 734, an ex-Lake Superior and Ishpeming 2-8-0 "Consolidation" type, was taken out of excursion service, as it was about due for a 1,472-day boiler inspection required by the Federal Railroad Administration. Without a steam locomotive to operate or maintain, most of the railroad's money would be focused on 1309's proceeding restoration work.

In early January 2017, the railroad said the reassembly process at the shop in Ridgeley, West Virginia would begin that month and announced that the inaugural trip of the restored engine would be on July 1, 2017; it began selling tickets for the excursion. That schedule was not met due to funding issues. The rail-



Moving the locomotive by rail to Maryland.

road had spent \$800,000 but needed a matching grant of \$400,000 from the state of Maryland to continue work.

In August 2017, planned operation in November was further delayed until 2018 after corrosion was found on the locomotive's axles requiring additional work on the axles, wheel boxes, and crank pins. Restoration almost stopped in the fall of 2017 due to a lack of funding, although work on the wheels continued with donations.

The railroad announced in November 2017 that restoration had stopped. \$400,000 provided by the state of Maryland had been spent and the railroad estimated it would take at least \$530,000 more to complete the restoration, including \$120,000 for the running gear and \$115,000 for the boiler. The railroad was soliciting donations from individuals, seeking additional grants, and raising money with "freight photo charters".

In January 2018, Maryland state senator Wayne Norman proposed that Allegany County provide \$530,000 to complete the restoration. The senator said there would be an economic benefit to the county in tourism, even drawing people from Europe and Asia. The county provides a \$140,000 annual operating subsidy to the railroad, matched by \$250,000 from the state of Maryland.

In February 2018, the restoration project suffered another setback when the railroad learned that an employee had stolen parts, including bronze bearings and wear plates, and sold them for scrap at a salvage yard. The thefts were discovered by the Allegany

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County Sheriff's Office after they were alerted by the scrap yard. Stolen parts included twelve original crown brasses and twelve hub liners. The parts would have to be remade as they were damaged during removal. The scrapyard had paid the employee a total of \$14,662 for the parts, some of which weighed three hundred pounds. Formal charges were filed against the employee.

In June 2018, the boiler passed a hydrostatic test required by the Federal Railroad Administration. The boiler was pressurized to 25% above its maximum operating pressure of 210 pounds per square inch. Stationary test firings to check for boiler leaks occurred several months later. The restoration had cost \$1.8 million as of mid-2018, including \$800,000 provided by the state of Maryland. The Western Maryland Scenic General Manager estimated the final cost would be \$2.4 million.

In September 2019, the project was again halted due to a lack of funds shortly after the front drivers were attached to the engine. The railroad said it would no longer make estimates of when the restoration would be complete. The total spent on the project was \$2.8 million.

In February 2020, a new crowdfunding campaign was announced to raise \$390,000 to finish the restoration. The organizers claimed the restoration could be

completed in six months. In early May 2020, restoration work resumed. A successful fundraising effort promoted by Trains Magazine raised over \$100,000 to restart the restoration. The WMSR estimated they were still around \$200,000 short of completing the work and started developing a fund to cover initial operating expenses and facilities for fuel, water, and ash removal to name a few items.

On December 31, 2020, the restoration was completed and the locomotive moved under its own power for the first time in 64 years as part of a series of test runs to return it to operating condition.^[24] Track improvements were made to accommodate No. 1309's extra-heavy weight. On November 19, 2021, No. 1309 entered its break-in run phase, running from Cumberland to Helmstetter's curve and back for testing. After numerous test runs, the No. 1309 locomotive finally entered excursion service on December 17, 2021, pulling the annual Polar Express train. On February 25–27, 2022, WMSR and Trains Magazine hosted a private photo charter run by of No. 1309 hauling an 11-car freight train consist over Helmstetter's Curve. ✓



C&O #1309 is now WM #1309



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#1309 in action on WMSR!



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