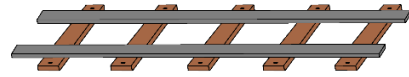


On Track



Vol. 3, Number 10, October 2024

If you are receiving this newsletter for the first time, welcome to the fold! We continue to catalog our visitor logs (some from several years past!), and your email appeared! If you wish to be taken off our list, just let us know, but we hope that you will stay with us, follow us online, and return as a visitor sometime soon. **Additional financial support will never be turned down (maintaining and operating a steam locomotive is expensive)!** Previous editions of this newsletter may be found on our [website](#). If you have comments on the newsletter, please send them to nmheritagerail@nmheritagerail.com or to your humble editor, [John Taylor](#).

FROM THE PRESIDENT:

On an extremely unfortunate note, NMHR is sorry to announce that long-time member and welder extraordinaire, Carlos Osuna, passed early this month. We profile him in this month's newsletter. He was a man of many talents; he loved to play host for his friends and cook, and he loved working and welding on the locomotive. If you are so moved, the family asks that you donate to NMHR in his honor and memory. He will be greatly missed by all who have had the pleasure of working with him.



We continue working to reach our financial goals. As I mentioned in last month's newsletter, we have a critical need to fund some specific projects and we really need your help. First and foremost, NMHR is pushing forward with purchasing the hardware required to equip 2926 with PTC and making all the modifications to the locomotive to support it. The expected cost for the equipment and modification is standing at around \$20,000! To add to that, as NMHR makes strides to have a bigger presence and hold public events at the Rail Yards, we need to raise \$5000 for concrete restoration work for volunteer and public safety, \$6000 so that we can purchase a metal shipping container (i.e., a conex) for on-site storage (and something big to put our logo on for all to see 😊), and \$2400/year for dumpster service so that we can keep our area clean. Please donate any amount that you can as every single dollar helps. You can donate through our usual channels, and also keep an eye out for a fundraising announcement, to help us with our activities with the locomotive and at the Rail Yards!

NMHR had another successful run to the South Albuquerque Rail Yards (the former Santa Fe Repair Facility), adjacent to the turntable, for our big, public 2nd Annual New Mexico



Railroad Days event. The city of Albuquerque, NMDOT, and BNSF worked with us to steam to the Rail Yards and host our event there. Over the course of a few days, from 27-29 October, the NMHR operating crew and many volunteers met with the public to introduce and talk to them about the locomotive. We held a couple of nighttime photo shoots and had a variety of vendors, information booths, and food trucks. On Saturday we hosted the Poco Quatros Model A Ford Club and on Sunday there was a variety of nicely restored period cars.

NMHR extends a special thanks to the Altenbachs, friends of 2926, who brought and operated their “steam cart” that holds a small vertical



boiler and steam engine for our guests to see and to answer their questions. We also partnered with the WHEELS Museum that gave our organizations a chance to share our visitors. By our count, the event attracted almost 900 fans of the 2926. Help us draw and even bigger crowd next year!

Planning and hosting this event was a lot of work, the biggest steam-up we’ve hosted so far, but we were really excited to bring 2926 back to the Rail Yards (the first time a steam locomotive has been there in over 70 years!) and let people see 2926 in a place where she spent some of her lifetime—the former Santa Fe Repair Facility. We continue to work towards having a bigger presence at the Rail Yards!

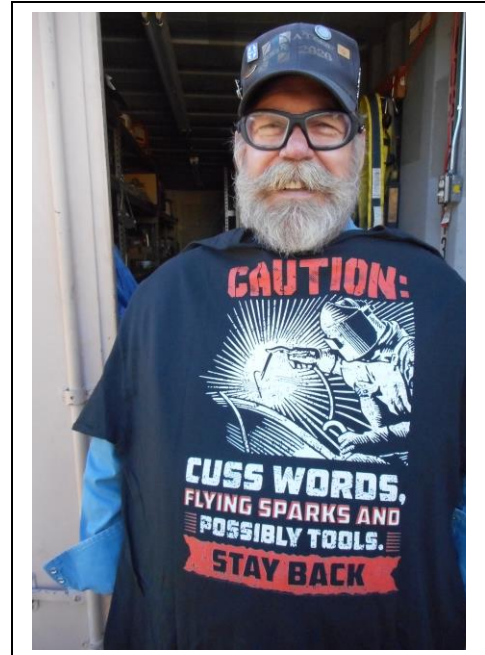
NMHR also hosted a catered BBQ dinner at the Rail Yards, which was served by the board members, for our volunteers to show our thanks for the time and hard work that so many of our volunteers have given to the locomotive over the last 25 years. A big Thank You to all and here’s to (at least) 25 years more of running one of the largest operating steam locomotives in the world!

Profile of a Member: NMHR labored for nearly a quarter century to restore the 2926. During that time hundreds of volunteers have added value to the project by turning wrenches, threading pipes, painting, and the myriads of other tasks that go along with such an undertaking. Of those hundreds, there are just a few whose efforts have been so essential to the successful completion of the project that we can truly say that we wouldn’t have succeeded without them. Carlos Osuna is one of those few.

Born in Los Angeles, Carlos and his family moved to Albuquerque when he was just a baby. He graduated from Valley High School in 1963 and entered UNM on a pre-med track. Injuries from a car accident ended his medical dreams, and he decided to try the trades instead. This turned out to be an “every cloud has a silver lining” event for him and for the 2926. He enrolled in a pipefitter apprenticeship program with Plumbers and Pipefitters Union 412 in 1970, and the rest is history.

Graduating to journeyman status in 1974, Carlos began a welding and pipefitting career that would take him across the country, working on powerplants, refineries, and occasional small plumbing jobs. He recalled that you “couldn’t buy a job during the Reagan Administration,” so paying the bills necessitated long periods away from his wife, Jodie, and family here in Albuquerque. He noted that he spent so much time working in New England that he “almost became a Yankee.”

Carlos is particularly proud of his welding work on nuclear power plants, a challenge and skill that required the highest certification given by the American Welding Association. These tasks included welds on stainless steel pipes and fixtures, some of which were as much as two inches thick. These welds were so critical that any flaws greater than 1/30th of an inch required complete removal and rewelding, and even the top-of-the-line welders who did this work had to completely recertify every 90 days. He remarked, “The Quality Control people became your best friends!” Carlos said that he enjoyed these challenges and joked that he got to be good enough to “weld the crack of dawn if he had a big enough machine.”



Carlos retired from commercial welding in 2003 and came to the 2926 a few years later. He immediately took on the task of fitting and welding all the new superheater pipes, a pair of which pass through each of the 220 flues in the boiler. This critical task lasted for almost 18 months. At the end of the job, the new pipes were pressure tested to 500 psi with no leaks.

He also completely rebuilt and installed the eight-inch pipe that takes hot water from the feedwater heater down to the hot water pump, again a critical and very challenging pipefitting and welding job. (This was an unfortunate necessity as this pipe was stolen, probably for scrap value, and had to be rebuilt.) Bedeviled by medical issues, Carlos had to step down from his work on the 2926 a few years ago but continued to come by the site whenever he could to share his enormous wealth of knowledge and experience with all of us.



Carlos and Jodie were married for 24 years, including her eight years as a heart transplant survivor, before she passed away in 2000. They have two sons—Paul and Scott. When asked about other hobbies, he thought for a while and said, “Well, I liked to fish!”

As I noted at the outset, we value each one of our volunteers, but the contributions of some stand head and shoulders above the rest of us. Carlos Osuna was one of those giants on whose shoulders all of us now stand. After years of discomfort, he passed on October 1, 2024. He will always be fondly remembered.

A short historical note: At the end of the nineteenth century railroads were entering the Golden Age of Steam. The rail network had become an early equivalent of the internet, providing impetus for the burgeoning economy and linking the country from north to south and sea to sea.

The nineteenth century had been an age of experimentation. Railroads tried various wheel arrangements, valve gears, boiler and cylinder sizes, and steam pressures in the quest for faster, more powerful, and more economic engines: always conscious of the constraints of a fixed 4 ft. 8 ½ in. gauge. In August we described the demise of the ATSF 2900 class of locomotives. This month, we'll look at their ancestry, focusing on passenger service in Santa Fe's mountainous western divisions.

The experiments of the nineteenth century led to new technological breakthroughs and better understanding of engine capabilities and performance. Baldwin's passenger locomotives emphasized higher top-end speeds (i.e., larger drivers). Although larger drivers meant higher top-end speed, they had lower start-up capability for large consists. The designers' answers to these challenges were larger boilers and fireboxes, which could produce higher steam pressures, more driving wheels and larger wheel diameters with discs rather than spokes to facilitate balancing the wheels, Walschaerts valve gears, and eventually transition to oil fuel rather than coal. These changes increased the weight of the locomotive by over 115,000 pounds and increased the tractive effort by 9,000 pounds.

The net result of the design innovations was the 4-6-2 "Pacific" class which entered the locomotive family between 1903 and 1904. However, with the introduction of steel passenger cars, train weights were such that the Pacifics frequently had to be double-headed. To avoid this, Santa Fe decided to go with more individual power and the 4-8-2 "Mountain" class locomotives were introduced in 1918. In the mid-1920s the design was further upgraded, with the addition of a larger trailing truck to support a larger boiler and firebox, resulting in the 4-8-4 3751 class, known as "Heavy Mountains" or, popularly, as "Northerns" (the Northern moniker came about because the first of these locomotives were sold to the Northern Pacific Railroad). In 1938, the 3751 class locomotives were converted from coal to oil, and a new larger tender was built to hold more than 20,000 gallons of water and 7,100 gallons of oil.

In 1938, Baldwin built ten locomotives designated as the 3765 class. These were based on the 3751 design but increased boiler pressure to 300 psi, increased driver diameter to 80 inches, and added Wagner drifting valves and the Worthington water delivery system. In 1941, ten more 4-8-4 locomotives were ordered by Santa Fe. Designated the 3776 class, they were essentially identical to the 3765 class but used nickel steel rather than carbon steel for the boiler, making them substantially lighter than the 3765s.

Because of the increased demand for mainline locomotives during World War II, Santa Fe ordered 30 more 4-8-4 passenger locomotives in 1943. Although these were essentially the same design as the 3776, the War Production Board restricted the use of lighter steel and Timken roller bearings to other wartime applications, so the new locomotives reverted to carbon steel, making them heavier than their predecessors. Timken roller bearings were added to the new class during the 1947 overhaul after the wartime restrictions had been lifted. These new locomotives would have logically been part of the 3700 family. However, because there were 30 of them, Santa Fe "ran out of numbers," so the new locomotives were designated as the 2900 class, including, in May 1944, our own 2926.

4-6-2 Pacific, 1903-1904



4-8-2 Mountain 3700, 1918



4-8-4 Northern 3751, 1927



4-8-4 Northern 2900, 1944

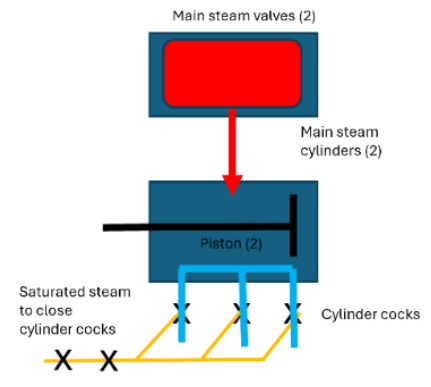


4-8-4 Northern 3776, 1941



4-8-4 Northern 3765, 1938

How does it work: During every steam-up and while we're on the road, you will notice a significant amount of steam and condensate coming from the bottom of the cylinders through three valves called cylinder cocks. The presence of carryover condensate in the cylinders substantially reduces the performance of the cylinders, so both cylinders have three cylinder cocks, which are used to remove condensate from the cylinders, some appliances, and associated piping. Although all three cylinder cocks are connected, the outer two principally drain the cylinder itself while the middle one drains the valve, appliances, and piping. They are normally held open by spring pressure and are closed by the engineer using a valve above and outboard of the brake stand in the cab. There is also a cylinder cock isolation valve on the saturated steam manifold





What's new in the store: We have some new products in the store from our collaboration with R.Duck Locomotive Works: NMHR-branded laser-cut wooden models that you assemble! If you can't make it to the store to pick up one of these beautiful and amazingly detailed models, please visit [R.Duck's Etsy store](#) (we get a small profit-sharing donation from certain NMHR kits that he sells). If there is something that you would like to see offered, please let us know. Our online store has gone live—just go to our [website](#) and click on the link.

How you can help and other tidbits: If you are interested in donating to our cause (because operating a steam locomotive is expensive!) go to our [GoFundMe](#) and [Venmo](#) links! Be sure to check out our [Facebook](#), [YouTube](#), and [Instagram](#) pages as well! Other potential sites of interest: our friends at the [Wheels Museum](#) and activities at the [Albuquerque Railyards](#). Please see our Membership page to discover our other volunteer opportunities.

Happy Halloween!

