

BIG STEAM NEWS

NEW MEXICO STEAM LOCOMOTIVE & RAILROAD HISTORICAL SOCIETY

Quarterly Newsletter

Vol. XVII No. 2

Apr---May---Jun 2018



Get Your Kicks™
With 2926

SANTA FE 2926 is
NEW MEXICO True



OOPS!! ANOTHER DELAY

TRACK PROBLEM CAUSES DERAILMENT

From the start of the Santa Fe 2926 restoration, there have been unexpected delays, including a dramatic and costly burglary of valuable radial buffer parts. With help from wide range of supporters, the hard working volunteers conquered problems causing the delays and forged ahead. The new year work was progressing satisfactorily. Through April and May everything was proceeding apace. The first steam-up of 2926 in more than 60 years appeared imminent—**then came Saturday, June 2.**

The first fire-up was planned for Monday June 4. The Saturday work session focused on having everything ready for Monday's very special work session. The locomotive and tender were connected. Fuel oil was delivered to the tender's oil tank on May 30th. There was treated water in the boiler. On Sunday June 1, the new firebrick would be cured with high heat from a propane heater.

Everything was going well at mid-afternoon on that hot day in June. It was time to wrap up another good work session and put 2926 in the engine house. The car mover was coupled to the front of 2926, chocks were removed, and the signal to move was given. Slowly, as at the end of many work sessions, the locomotive and tender began to move over the pit toward the engine house. After moving only a few feet, there was a loud 'POP' under the rear of the locomotive, and everything came to a stop.

A quick look at the location of the noise revealed the problem. On the engineer's side, the rear wheel of the trailing truck had dropped inside the rail. The front wheel on the same truck was just a fraction of an inch from derailment. On the fireman's side, the supporting H-beam over the pit was bent, leaning out, and the rails were spread. With the derailment, the Saturday work session just got a lot longer. The location of the derailment so near the pit precluded conventional re-railing. A search for assistance resulted in a quick visit by re-railing specialists from Hulcher Services. The tender was disconnected and moved to the engine house.



Above Derail Photo: The photos above reveal the derail problem on the engineer's side of the locomotive's trailing truck. The photo at left shows the rear wheel off the rail. The photo at right shows the front wheel defining a fraction of an inch.

The volunteers finally left the site at 7:00PM. The Monday June 5 work session was still scheduled, but it was far different from a steam-up operation. Without the option of using a conventional re-railing method, it was determined that the locomotive would have to be **lifted and moved forward**. Santa Fe 2926 had not been lifted in many years. The huge locomotive's last lift was done more than 60 years ago by the 250 ton crane in the AT&SF backshops. That crane still exists, but 1) it is not mobile, 2) it has set idle for years in the backshops. The lift would require an innovative approach by some experts. It was Hulcher Services to the rescue with two large side boom equipped D8 Caterpillars.

Bringing the two big Cats on site required a lot of preparation. Positioning one Cat with heavy counterweights on each side of the pit meant that the pit itself would have to be reinforced. The pit and the original concrete slab were not designed for more than twice the weight of the locomotive. The volunteers went to work clearing infrastructure (such as the on-site store) to provide space for the D8s. They also had to reinforce the pit area for the added weight demand. Some of the volunteers from as far away as Lubbock, Texas, and Phoenix, Arizona were ready for the steam-up. Instead, they joined the work crew to prepare for the big lift.

Below, Preparing for the big lift: 1) Delivering ties for pit reinforcement; 2) Some ties had to be cut to fit; 3) Ties and horizontal steel bars were used to reinforce pit walls; 4) The store is disassembled to provide room for Caterpillar counterweight; 5) An overall view of the work is only visible to onlookers when 2926 is re-railed and moved forward. Much of the preparation was done beneath the locomotive and in the rain.



THE BIG LIFT

HULCHER SERVICES TO THE RESCUE

Early on Monday June 18, a crew of 2926 volunteers was on site for a special work session. It was quite different from the planned steam-up session that was delayed just two weeks earlier. In fact, the session was a lot of watching and work only as needed. Most of the work was to be done by Hulcher Services with an array of heavy equipment. Hulcher had not recently had any other calls to re-rail a 200 ton steam locomotive. But they were very experienced at picking up just about any other kind of derailed rolling stock. All they needed was space to set up and operate. Due to very limited space on the restoration site, they used the large open space on the adjacent GSA warehouse property for preparation.

The Hulcher convoy arrived at the 12th St GSA entrance Monday morning. Several heavy equipment trailers carried two D8 Caterpillar's, along with an assortment of side-booms, counterweights and related equipment. The professional crew quickly unloaded the Cats, attached the side-booms and counterweights, and headed for the site entrance at the front of the locomotive..

The photos below provide a brief view of a busy day. They also reveal just how restricted the workplace was—even after removal of the store and other infrastructure. For more photos and videos of the big lift, check our web site: www.nmslrhs.org

Arrival and Setup: 1) Hulcher team arrives with truckloads of equipment; 2) Caterpillars are quickly unloaded and lifting



Getting Into position: 4) The first Cat enters the west entrance by the GSA building; 5) It proceeds by the engineer's side of 2926; 6) Both Cats are in position for the lift. Counterweights are extended, revealing very little clearance. The counterweight of the Cat on the right occupies the space that was once the Santa Fe 2926 Store. (The store will be replaced with a mobile unit.)



The Lift And Back On The Rails: 7) The lift was not as simple as it appears. When the engine was lifted and cleared the pit, the twisted rail and supporting beam snapped back into place. That derailed the firemen-side trailing wheel placing it outside the track. A little more lift, and forward move finally got all wheels back on track. 8) Back on track, the locomotive was moved forward by the GSA warehouse,, and crew members review the site. After snapping back, the track looks straight again. It was appearance only. There was still a lot of recovery and repair ahead.



(Continued From Page 2)

Recovery And Repair: With the locomotive back on rails and away from the pit, all of the cribbing and support was removed from the pit, (Photo 1). In Photo 2, Lewis gets some experience pulling spikes the way it was done before the advent of power tools. In Photo 3, the bent beam with a rail section still attached is lifted from the pit by the gantry crane, Big Bird. Removal of the pit structure elements also required a lot of 'in the pit' cutting and grinding before removal.

With the old pit structure removed, new larger beams were lifted in place by the crane, (Photo 4). Once the new beams were in place, the welding team, led by Danny and Rick spent several work sessions in the pit welding the new structure, (Photo 5). They did so in near 100° ambient heat. Even with a canopy and fan, it was a bit warmer in the pit. Finally, after getting additional help in properly installing the replacement rails from Gandy Dancers, the volunteers replaced and tamped the ballast, (Photo 6).

The track was once again ready for 2926 and its tender. It was also time to get back to work on finishing such little details as sheet metal jacking, radial buffer adjustments, and a plethora of tasks that will soon lead to the steam-up that was delayed.

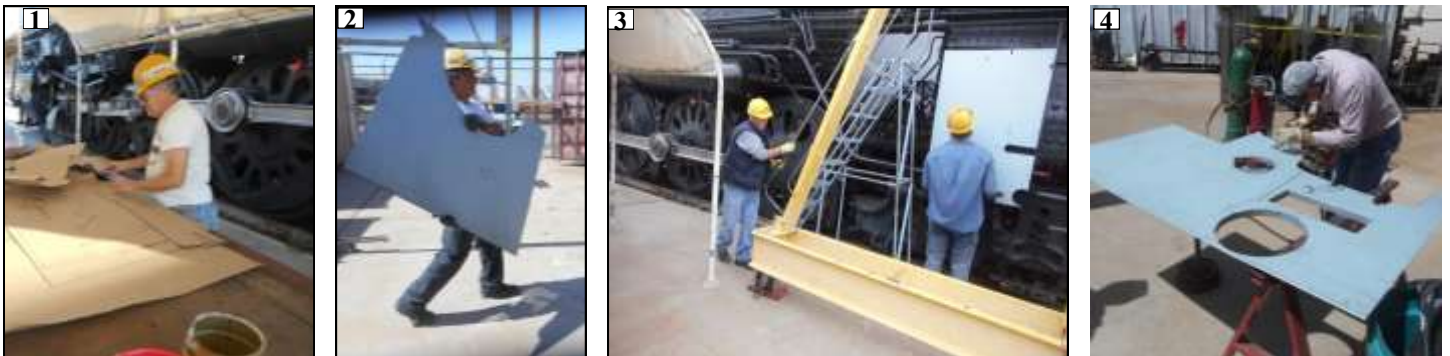


BEFORE THE DELAY

As already stated, second quarter work was proceeding well. Some of that task activity is described in the following pages. Until June 2, everyone was looking forward to having New Mexico's Flagship Steam Locomotive under steam by midsummer. The derailment certainly interrupted that routine. Though some task work continued during re-railing and repair, most volunteer effort was directed to work on the problem that caused the delay. Some of the action that was feeding steam-up expectations follows.

Sheet Metal Work

The seemingly never ending task of producing new sheet metal jacking was slowed, but not stopped by the delay. Some of that work continued during the re-rail and track work. Using the old rusted jacking, patterns are made, (Photo 1). They are sent to the sheet metal shop, and used to cut and shape the sheet metal. The newly cut and shaped parts are returned to the site to receive a final fitting, (Photos 2,3,4). The fitted parts are then sent to the paint shop.



BIG STEAM NEWS is published quarterly by the NMSLRHS, a New Mexico Non-Profit Corporation.

President	Michael Hartshome
Vice President	Dave Van De Valde
Secretary	Gail Kirby
Treasurer	John Gibbons
Chief Mech. Officer	Rick Kirby
Chief Safety Officer	Jon Spargo
Webmaster	Rich Bugge
Facebook Editor	Julie Tiedemann
Newsletter Editor	Doyle Caton

Restoration Site: 1833 8th St. NW
Telephone: (505) 246-2926
Web: www.nmslrhs.org

VISITORS WELCOME
9:00 AM -2:00 PM Wednesday and Saturday

LOOKING FORWARD: The photo below looks over 2926's stack from behind the sand dome. It shows the end of a short siding that has been home to the historic locomotive during its restoration.



LOOKING DOWN THE TRACK

Since early May 2002, Santa Fe 2926 has faced down a short piece of track ending at 12th St. NW. That view will soon change.

The restoration has taken considerably longer than originally imagined, but New Mexico's rail heritage icon will soon look down a longer track. Having overcome the latest delay described in this newsletter, the historic machine should be under steam in a few weeks.

There will be test and adjustment period before 2926 is ready to look down main line rail. That will be done on its home siding and a spur to which that siding is attached.

During the test period, it will be possible for visitors to see a living, breathing Santa Fe 2926 in action once again. The world's largest operational Steam Passenger Locomotive will be quite a show even sitting still under steam, or under test operation on a remote siding.

And what will happen after the test period?

That is subject matter for much discussion. Nationally, the future of passenger rail service, both for commercial and recreational travel is uncertain. Much of the uncertainty is driven by actions and statements of the National Railroad Passenger Corporation—*dba Amtrak*.

Rail travelers, and recreational rail fans are familiar with Amtrak. It is an intercity passenger service in the U.S. and a few Canadian cities. As such, it has control over many of the main lines that steam passenger commemorative steam passenger excursions could operate. If implemented, Amtrak's plans would severely limit steam passenger excursions in the U.S.

Steam railroads were a major factor in the development, and growth of New Mexico and other western states. Steam rail excursions to commemorate that heritage must be allowed to operate. That means much planning, marketing, and broad public support will be necessary.

(Continued From Page 3)

Once the shaped, fitted, and painted jacket parts are returned to the site, a number of them are installed upon delivery. Photos 1&2 show one with special bends and cutouts that is installed atop the smokebox.

Others, especially boiler jacketing pieces, are stored until steam-up and final check for leaks.

The glossy black mirror-like finish is revealed in the large panel undergoing a fit check in photo 3.



Tender Work

There was still work on the tender during the three late spring months. The fireman's sand box on the front of the oil tank needed repair, and the radial buffer still needed work. There were also tasks related to checking and preparing the water and fuel bunkers for the steam-up.

The Sandbox Task: This task was the result of an oil leak—**yep, another delay!** Not as big as the derail, but still a delay.

The sandbox is mounted on the fuel bunker, within easy reach of the fireman.. The front wall of the bunker is the back wall of the sandbox.

Moisture trapped in the sandbox had created corrosion on the back wall. Near the bottom of the sandbox, (Photo at right) the corrosion was not visible inside the fuel bunker. during cleanup and repair

On April 18, a tanker truck came to fill the bunker. Another leak check was done. All was going well—then a slow leak appeared at the sandbox. Since the leak wasn't caught sooner, the sand was saturated, and a mess was spreading. The oil was pumped back into truck.

The sand was removed, and the hole was located. The front wall of the sandbox had to be removed to gain access to the hole for repair. The hole was patched, and in the photo at right, replacement of the front wall is near completion.

More Buffer Work: As reported earlier, theft of some radial buffer parts in 2012 was costly—**yes, more delay!** The stolen parts were not available at the parts store. They had to be replicated.

For the replication, parts from 2912 in Pueblo, Co. were used as patterns. After producing new parts, the crew discovered that the 2912 and 2926 parts weren't quite the same. That meant disassembly, followed by cutting, machining, and welding to make the new ones fit.



Above: More radial buffer work at the front of the tender.

(Continued On Page 5)

(Continued From Page 4)

Preparing The Fuel And Water Bunkers: Spring of 2018 saw the final stage of a tender related task first started in 2003. The restoration has taken so long that a number of 2926 fans as well as some of the volunteer work crew did not experience most of the tender restoration. That work was done before starting on the locomotive. Starting with the tender gave the volunteers a chance to learn and develop teamwork procedures before tackling an even bigger challenge—Santa Fe 2926 itself.

The following paragraph and 2003 photos shows some of that initial cleaning and preparation. The first task was cleaning the water and fuel bunkers. It was a very messy task. That initial cleaning occurred **fifteen years** ago, when some of our best current volunteers were still in day care. Sometime, a few years after being placed in the park, the city had welded shut all the hatches on the water and fuel bunkers to prevent access by intruders. Once the welds on the hatches were cut, the restoration crew discovered that some intruders had already been inside before the hatches were welded. Cleaning removed hundreds of pounds of scale, rust, trash, and fuel caked like asphalt. A number of 1960's era soft drink and beer cans, (possibly collectibles?) were also recovered, along with a few wrenches and other metal items.

That first cleaning, and most mechanical restoration of the tender was done by late 2007. It was reassembled, and painted. It has since been a significant attraction, traveling downtown twice (towed once by Amtrak & once by BNSF) for national train day.



Bunker Cleaning And Preparation, Stage 1, 2003: The cleaning began in early 2003 by removing caked oil inside and out, (1 & 2). The fuel bunker was then lifted, (3) from the tender and placed on cribbing for more cleaning, Surprise!! More caked oil and assorted trash in the fuel bunker pocket, (4). Inside the water bunker, the crew scraped, scrubbed, and needle scaled hundred of pounds of scale, rust, and trash.

This spring, as the first steam up approached, attention was directed to cleaning and preparation of both fuel and water bunkers. The Stage 2 cleaning task meant trips inside of both to be sure they were ready to receive oil and water.

That task fell to Martin S. Though Martin had seen the 2003 photos, and heard some stories of the very dirty earlier tasks, he chose to forge ahead. The photos at right show what happened next. In the first, he is deep inside the water tank. In the second, he is seen emerging from the front hatch. From the appearance of his tyvex suit, it appears that he encountered some rust inside. Inside, he removed sediment and scale, checked internal fittings, and anything else that might interfere with the locomotive's water supply.

Martin's work inside the water tank provided him with an opportunity to earn a Pigpen Award. The award is presented to any volunteer who manages to get dirty enough to match the character "Pigpen" in the Peanuts comic strip. He shows his new "Pigpen" patch in the third photo.



A SMALLER MACHINE

One doesn't have to look far to see the largest machine on the restoration site. It is the crown jewel of New Mexico's rail heritage, Santa Fe 2926. It will soon be the largest steam passenger locomotive in operation. There are a few smaller machines on site, including Lurch, the car mover. Capable of moving 1300 tons, Lurch is used to move the huge locomotive and tender when not under steam. There are two forklifts that like 2926 and Lurch are historic machines. But there is one historic rail machine that is quite an attraction.

The speeder pictured at right once carried work crews along the railroad to keep tracks in good condition. After retirement, it rested for years in a yard in Albuquerque's north valley, slowly rusting away. Acquired a few years ago by Albert Leffler, it was hauled to Indianapolis, Indiana where Dick Downing and friends restored to operation. It was then returned to the 2926 restoration site where it can be seen on occasion putt-putting along rails near the site.



Putt-Putt: The recently restored railroad speeder crosses 8th St. as Ken D.. stands by to direct traffic.

CONNECTIONS

Locomotive-Tender: A big steam locomotive is going nowhere without its tender behind. Connecting the locomotive to its tender is much more complicated than a hitch on a pickup or the fifth wheel on an 18 wheeler. Like those hookups, there are electrical and air connections for brakes and lights. In the case of the locomotive, there are also water and fuel connections. Those are relatively easy compared to the primary physical connection between the locomotive and its tender.

That connection consists of the two drawbars, each weighing several hundred pounds. Holding the radial buffer tight between the locomotive and tender, they carry the weight of the entire train—everything behind the locomotive from tender to caboose. In the restoration, they have been the cause of some very heavy, dirty work for the volunteers. Those volunteers were operating under conditions much more difficult than those of yesteryear in a well equipped back shop.

The drawbars fit into pockets on the rear of the locomotive and the front of the tender. There, they are held in place by huge pins that weigh up to 90 pounds each. They are the towing link between the locomotive and tender.

The drawbars were removed at the start of the restoration. Since then, the tender and locomotive had been linked on occasion, but only with chains snugged tight between the two. Complete, proper connection was necessary for the first steam-up. That included those heavy drawbars—and some hard dirty work. In April, the drawbars were reinstalled for the first time in sixteen years.

The photos at right show the drawbar installation. Any relationship to the process that was once used in the Santa Fe shops is purely accidental—but the hard working volunteers got it done!

The story of the heavy drawbar work does not end there. When the derailment happened, the tender and locomotive had to be separated. It was back to work for the drawbar team. They were lucky, because they did not have to lift the drawbars. They pulled the big pins only on the tender, leaving the drawbars in place on the locomotive. That will make the reconnection a bit easier.

* * * *

One More Connection: The connection pictured below may not involve wrenches, grease and grit, but it is critical to the success of the Santa Fe 2926 restoration. Our web site, Facebook, and even this quarterly newsletter are connections to the outside world. But the administrative work inside the reefer that Treasurer John G. and Secretary Gail K. are doing here is an absolute necessity. It will only increase when the locomotive enters operation.

As a mobile tourism attraction there will be multiple levels interface with other organizations, tourist destinations, regulatory agencies, and the general public.

The increased activity means NMSLRHS will always need new volunteers and supporters to keep Santa Fe 2926 operating as an icon of New Mexico's Rail Heritage.



1 Drawbars are delivered to the rear of 2926 by forklift.



2 Are you sure this will work as well as original shop equipment?



3 Bill W. in the pit preparing to insert a big pin.



4 Bill hopes all the pins go in this easy.