On Track

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If you are receiving this newsletter for the first time, welcome to the fold! We continue to catalog our visitor logs, 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 to visit us in person 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:

NMHR volunteers are working furiously to prepare the locomotive for our upcoming 3rd Annual New Mexico Railroad Days on 27-28 September at the Albuquerque Rail Yards. We are getting close, but progress has been slowed because our car mover, a Shuttle Wagon we affectionately call "Lurch," has been in the shop with brake and hydraulic problems, so we have had to work on the locomotive inside the engine shed. We must get 2926 pulled out of the shed soon so that we can reinstall the recently rebuilt fireman's-side air compressor and a large, heavy cover on the Worthington feed water heater tank. **Update**: A big Thank You to Bobby at Anaya's Roadrunner Wrecker Service for donating the time and equipment to pull 2926 out of the shed and back in again. This generous act allowed us to get the compressor and cover back on!

NMHR continues to purchase equipment and hardware for our eventual conversion to Positive Train Control (PTC). We are approximately 60% of the way towards having 2926 fully compliant.

I know I've said it many times, but running a steam locomotive is expensive. We need your help to cover the costs of PTC equipment, locomotive maintenance supplies, site equipment maintenance and upkeep, consumables, new tools, everything! Our current immediate need is to get our car mover "Lurch" up and running again (or replaced) so we have something reliable to move 2926 around the restoration site. Every dollar you donate helps NMHR move closer to attaining its bigger long-term goals. Please help!

Steam in England—Part II. I reported in January about a family trip to England where we met with Mr. Richard Parrott and Mrs. Sheila Childerhouse. Mr. Parrott owns several operating Burrell steam-powered traction engines on his farm in Weeting and has been chair of the Weeting Steam Rally for many years, and Mrs. Childerhouse is the director of the Charles Burell Museum in Thetford.

We returned in July to again meet up with our friends across the pond and attend the Weeting Steam Rally and County Fair; a three-day event that showcased 132 operating steam traction engines, numerous stationary steam and petrol/paraffin/oil engines, British WWII vehicles (there was a relatively new Ukrainian tank driving around), vintage vehicles and motorcycles, petrol- and diesel-engine farm tractors, carnival rides, and numerous vendors. The traction engines on

display included “agricultural,” “land locomotives,” steam rollers, plowing engines, and Showman and Showman Scenic engines, along with some specialty equipment. (Yes, each of these traction-engine labels denotes a specific type of traction engine with a specific use.) The event was held on 170 acres of farmland owned by Mr. Parrott. It was an incredible event and being able to see these beasts freely trundling around the grounds amongst the visitors made for a fascinating experience.

On Saturday evening, the carnival rides were in operation. One of the rides was a steam-powered carousel (Figure 1) and the other a tilt-a-whirl-like ride. The fascinating thing about this ride was that it was powered entirely by the showman’s scenic engine “Ex-Mayor.” (Figure 2) The showman’s engines use a belt to drive a generator mounted above the smoke box. These generators produce approximately 40kW of power and were specifically designed to operate the carnival rides and pull the carnival to the next town after it’s all packed up in 2-4 carriages!

Figure 1. Steam-powered carousel and detail of steam engine

Figure 2. Henry standing with Ex-Mayor that powered the “Tilt-a-Whirl” style ride (not shown)

There were numerous demonstrations: timber sawing using period sawing benches, field plowing (Figure 3), and a traction-engine powered wheat-harvesting, threshing (Figure 4), and straw-

bailing. The field plowing was particularly interesting as two plowing engines pulled a steel cable across the field and, between them, a simple reversible plow was pulled across the field. The cable is stored and wound around a large drum located under the boiler. Some of the specialty equipment present was a vertical-boiler city bus (Figure 5) with a totally enclosed steam engine and condensing boiler (the system condenses the steam back into water for reuse, reducing or eliminating the need to refill with water tank).

Figure 3. Plowing engine and plow in the background

Detail of plowing engine winch drum

Figure 4. Threshing demonstration and part of the bailing system

Figure 5. Vertical steam boiler city bus (background) pushing a traction engine into the water refill area

There were also a variety of lorries (Figure 6) and wagons, steam rollers (Figure 7) a petrol driven, single cylinder road tamper, rock crushers, operational scale traction engines (Figure 8), which are popular because they cost significantly less to own and operate. All of these engines are painted in traditional color schemes, as the British took, generally, more colorful ascetic with their steam equipment. They also give each piece of their equipment a name (e.g., in Figure 7, the traction engine is named “Jessie”).

Figure 6. Diesel lorry


Figure 7. One of dozens of steam rollers and traction engines


Figure 8. Grandson on one of dozens of scale traction engines at the rally

Henry and I took the opportunity to steer a few of them (the rally had “public steering” events), but on the last day we both had a hand on the Charles Burrell Museum’s Queen Mary (Figure 9), while Howard, a museum volunteer, controlled the speed and direction (not shown). We steered for a combined ½ mile, at which point Howard took over, and, single handedly, backed it and k-turned it to into a tight spot to connect to a carriage. Lastly, a view of many of the engines lined up after a parade around the center arena (Figure 10).

Figure 9. Henry steering Queen Mary (and me sitting on the coal bunker)

Figure 10. So many engines!

On another traction engine-related note, we also made a trip to the Thursford Steam Museum. This is a static display of a collection of over 30 agricultural, Showman, and steam rollers collected by George Cushing. George was a member of a road construction crew in the 20s and purchased his first roller from the company where he started his own sub-contracting business. His love of steam-driven machinery led him to begin collecting. He purchased steam equipment through the 60s, paying as little as 25£ for traction engines and rollers from the scrap yard. He restored them and they were added to his growing collection. His collection can be seen at the museum, along with a couple of period carnival rides and street and stage organs.

Profile of a member: You know that guy with the funny T-shirts who hangs around the foundry pounding sand—well, that's our boy David Simpson! David hails from Columbus, Ohio (a place he strived for many years to leave!) and graduated from Whetstone High School (home of the Braves) in 1981. He tried being a professional student at The Ohio State University but enjoyed the recreational aspect of college more than the academics so moved to Israel and lived in a kibbutz for several months. He notes that living as a Gentile in an Israeli kibbutz can, at times, be "culturally challenging!"

Returning to Columbus (living with parents being a financially desirable way to go), he attended Columbus State Community College and got an associate's degree in aviation maintenance. While he was back in school, he happened to watch one of the Indiana Jones movies and decided that a life of adventure looked alluring, so he went to work for an Army contractor on Kwajalein atoll. This gave him a chance to indulge in one of his favorite pastimes, scuba diving (he is a certified diving instructor!). Kwajalein was a former Japanese naval base, and the lagoon was full of sunken Japanese ships. It was also used to dispose of hundreds of tons of munitions and planes that were "left over" from World War II and from the early US nuclear weapon tests at Bikini and Eniwetok.

He recalls that those dives were spectacular. One adventure was diving on the German heavy cruiser *Prinz Eugen* which had been used as a target during the Able and Baker nuclear tests of Operation Crossroads. After being towed to Kwaj, she broke a mooring line and ran aground three islands up from Kwajalein, and capsized upside down. David says that one of his scariest dives was going inside the *Prinz Eugen* because everything is upside down, and it was easy to get completely disoriented. He also dove on numerous sunken scrapped American Dauntless fighter/bombers as shown below.

After two years in the South Pacific, Dave went back to school at Devry (in Columbus, of course!) and got a Bachelor of Science in electrical engineering technologies in 1995. When he left Devry, he FINALLY escaped Columbus and worked for 15 years on semi-conductor inspection equipment and as a field service engineer for KLA-TEMCOR in Silicon Valley, IBM in Burlington, Vermont, and Intel in Rio Rancho.

He and his former wife moved to Albuquerque in 2021 where he worked at Intel for ten years as a field service engineer. In 2012 he went to work for Sandia Labs where he is still gainfully employed. While at the Labs he has worked on satellites, weapon systems, and in programs for which he would have to kill you if you even asked about them. He met his current wife, Terry, a wildlife biologist, in 2018 and they have been happily married for five years.

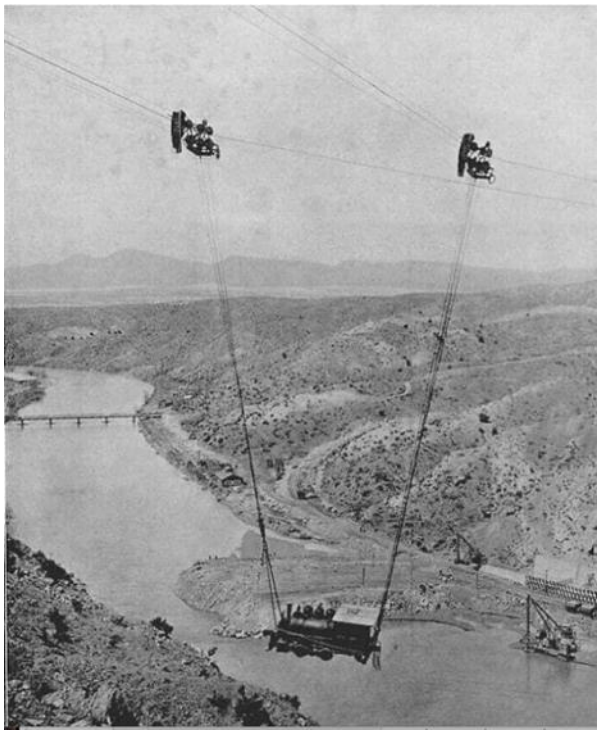
David first encountered the 2926 when he was dropping his child off at school on Mountain Road. While driving back on 12th Street he noticed a steam locomotive across the field. He remarked that he "nearly wrecked his car!" Later he came to an Open House and joined our fine organization in 2014. Since then he has been a fixture in the foundry, helping to mold and cast plaques, key chains, and various parts for the Cumbres and Toltec.

Dave and Terry have two children, Bridget, a student in philosophy, psychology, and chemistry at UNM (one of the few individuals that I know of who has actually **ACED** organic chemistry!), and Ryan who owns his own carbon fiber 3-D printing business, making parts for various defense applications.

When not working at Sandia or on the 2926, David indulges in home electronics. One of his recent projects has been backfitting an authentic railroad lantern with LED lighting.

So, the next time you wander past the foundry, make sure to check out the T-shirts—they are usually ocean-themed and always have a message!

A short historical note: An interesting image showing a locomotive being transported across the Rio Grande river in 1910 using an aerial cable system.



How does it work: The insulation on the pipes and boiler on the 2926 plays two important roles. First, it helps the steam systems retain the heat that has been added from the firebox, thus preventing heat loss and increasing overall efficiency. Secondly, it keeps the outer layers of pipes and boiler sheathing from being a heat danger to the crew that must work around a hot boiler.

The boiler and pipes are made of steel and steel transmits heat very effectively. Technically, this is described as the metal having high thermal conductivity. In the 1940s when 2926 was built, the insulation of choice was asbestos. Asbestos is one of six naturally occurring fibrous minerals with an extremely low thermal conductivity, meaning that it does not transmit heat very effectively. In addition, when processed into sheets, it is a very convenient product to use to cover boilers or other hot surfaces. It can also be formulated into tape and even paste that can be used to insulate piping and other surfaces.

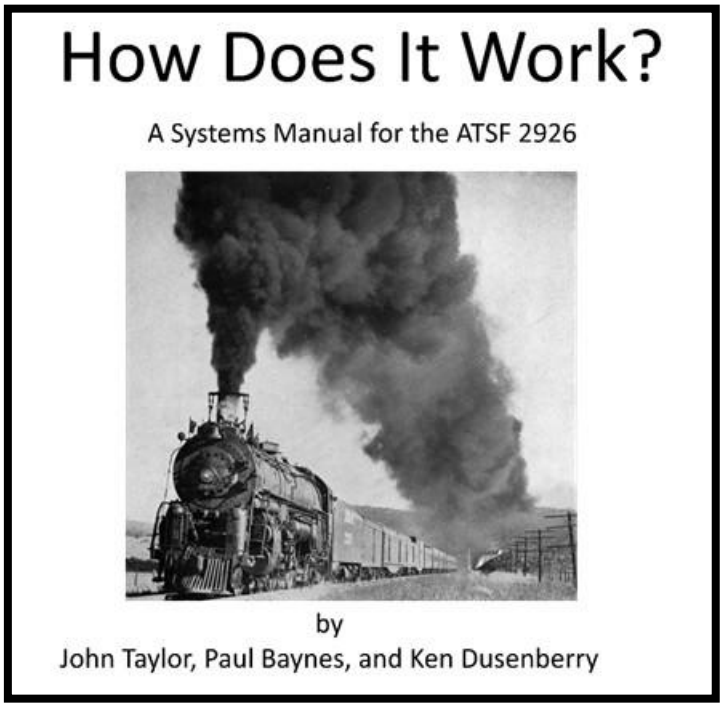
Although a link between asbestos exposure and lung disease was suspected as early as the 1930s, a definitive link was not established until a South African study in 1960 when asbestos exposure was directly linked to mesothelioma. Since that time, the use of asbestos as an insulating material has essentially disappeared.

When it came time to remove the asbestos from the 2926 boiler and pipes, we hired a contractor who had the right equipment and the disposal licenses to take care of our engine. But, what to replace it with? As it turns out, there is a ceramic fiber product called Kaowool that has a thermal conductivity approximately 40% lower than asbestos.

Asbestos removal from the 2926

We obtained the Kaowool sheets (2-inches thick for the boiler and 1-inich thick for the smoke box) as well as Cotronics flexible ceramic fiber tape for the pipes. So, not only did we get rid of the asbestos health issue, we actually improved our heat management situation!

Speaking of "How Does it Work," we offer you a new opportunity: After considerable work, we have produced a comprehensive systems manual for the 2926. This document diagrams each of the major systems on the locomotive and provides an explanation of how the systems work. We encourage everyone, especially those who regularly work at the site, to purchase a copy. The cost is $5 for regular workers (those who have taken the safety course), $15 for other members, and $25 for the general public. Drop by the store and take a look!



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.

Since August has no official holidays, here are some for your consideration: