

## Motorcar 23 Project Update

- Nicholas Manos

I started volunteering at the museum this year to work the weekend caboose trains. Being a Model T owner, Motorcar 23 caught my eye on the first day. I asked about it and quickly learned it had some problems that needed attention. I offered to assist with repairs and was put in touch with Director Charlie Spikes, the project lead for the motorcar.



Charlie and I discussed the issues he was seeing with the car. Specifically, the engine overheated shortly after startup and there was a persistent fuel leak beneath the car. After extensive inspections and a few test runs, it was decided an overhaul of the ignition and fuel delivery systems were in order.

The fuel system repairs were relatively simple. The leak was from the fuel bulb, which had previously been modified to have a remote shut-off lever. This lever, when actuated, was rubbing against the bulb causing the shaft assembly to work out of its bore. Since this is a spring held interference fit, it leaked whenever the lever was not perfectly vertical. To resolve this, the fuel bowl was replaced with a stock unit and a new shutoff was installed at the carburetor, a more convenient location for the operator. The existing fuel line was also noted to be run above and too close to the exhaust pipe. A new fuel line was installed with proper routing.

The ignition system on the Model T appears very unique when compared to more modern automobiles. A key distinction is the use of individual ignition coils for each cylinder which makes engine timing dependent on every coil being in proper tune. Malfunctioning coils always lead to poor operation and overheating. The coils are cased in wood and installed in a coil box that uses wood backers for the sides that make contact with the coils. The coil box normally has a lid to protect the coils, but Motorcar 23's lid was missing and water damage from recent storms had deformed all the coil cases and the coil box,

rendering them unserviceable and unfit for rebuild. A replacement box and lid were acquired, sandblasted, painted and rebuilt using plastic backers in place of the wood, along with all new contacts. Four donor coils were rebuilt with new capacitors, points and shims. The coils were all tuned using an electronically cranked coil tester (ECCT). The ECCT is one of the best methods of coil tuning available, as it allows all coils to be tuned to fire at precisely the same time after activation. This provides for a properly timed and smooth running engine.

Some additional electrical issues were noted and corrected:

- The car was wired for positive ground. Ford began using positive ground in 1928 with the Model A, but the Model T was delivered with negative ground
- The battery was raised and secured in its carrier
- The defective starter switch was replaced. Although it had been replaced at some point in the recent past, it appeared a museum visitor had become convinced that if they just stood on it a little harder, it would work.
- A new left side wiring harness was installed to facilitate headlight and tail-light wiring. New bulbs, sockets, springs, lenses and lamps were installed and the lights were wired and tested good
- A fuse was installed for the main feed from the starter switch as a safety measure

After the repairs, it was time for a test run. Charlie took the car out for a few spins, running a good 15 minutes each time with no overheating or fuel leaks. Charlie reported the engine appeared to be running well. I later took the car out for a 30 minute run with similar results.

Although we were now complete with all the planned repairs, one new 'problem' caught my interest. While working under the car, I had noted the presence of an Aermore exhaust whistle. I

asked Charlie about this and he indicated it didn't work well, if at all. A quick test confirmed this, as almost no sound could be heard. The muffler was also noted to be heavily rusted and due for replacement soon. A new exhaust cutout valve was acquired, along with a new pipe and muffler. The exhaust cutout needed additional welding to seal some gaps, which Brian Waller quickly took care of, showing off his TIG welding skills on stainless steel (no easy task). The exhaust was replaced and the whistle installed on the new valve. It makes quite a bit of racket now, but we have yet to demo it for anyone so hopefully it will be found to be adequately obnoxious.

Additional work is planned for the 2024 season:

- Fabricate and install new floorboards
- Adjust pedal linkage and floor boards to allow for entering high gear
- Adjust transmission brake band to improve braking action
- Investigate the magneto to see if we can restore operation without an engine overhaul
- Repair windshield support and glass



*Keep an eye out for future updates!*  
- Photo by Nick Manos



*Author's sons enjoying 25283 in August of 2004*  
- Photo by Nicholas Manos

### UP 25283 Caboose

- Nicholas Manos

Those of you who visited the museum this season may have noticed that a particular yellow caboose was missing from the weekend train. It was here, to be sure, but it was off to the side, out of the way. A number of issues had kept it from service. Recently, it was moved into the shop for repairs to return it to the *Pumpkin Express Trains*.

Car foreman Phillip Schmierer and CMO David Elems were the first to go to work, resolving issues with the brake system. After this, I was asked if I would like to tackle some woodworking projects. Given my sons' love of this caboose, I eagerly agreed.

I was assigned three issues to resolve. The floor under the conductor's desk was rotted out and could best be described as a collection of dry rot held together by really old linoleum and top notch glue. The conductor's desk seemed to have suffered repeated abuse as a chair and was separating from the wall it was (sort of) mounted to. Oh, and the ceiling panels were falling down... minor issues like that.

I started with the ceiling. After removing the trim, I was able to have a look at the problem. UP felt it was entirely adequate to hang plywood, upside down, with common box nails. It is

surprising it lasted this long. Setting some screws secured all the panels. Some additional damage repair and new paint to two panels put the ceiling in good order. New trim boards have been milled and painted and will be installed in the coming weeks.



Switching focus to the floor, the first task was to remove the sheet metal baseboards. Although UP used smooth nails on the ceiling, they used twisted shank nails to secure the baseboards very well. I guess baseboard movement is a real hazard when you are trying to dodge falling ceiling panels! The damaged floor was cut back to good wood, which in this case resulted in a 6 foot by 3 foot area being removed. The original construction used plywood on fir supports that were bolted to the steel car bottom. The supports were entirely destroyed by dry rot and the steel floor was severely rusted, but thankfully it was not rusted through. A good scraping of the larger rust followed by wire wheel work cleaned up the floor for a thick coat of rust stop paint. New supports were milled using reclaimed fir beams. These were secured to the floor using new hardware in the existing bolt holes. New 1-1/8" plywood was then applied to complete the floor.

The conductor's desk was another case of common nails being used where screws were a better fit. New screws and a bit of adjustment pulled the desk tight against the wall.

Steve Habeck is now working on resolving some electrical issues, including re-routing conduit

that had been used as a grab iron in the past. My sons may or may not have been involved, but I didn't mention this to Steve.

Caboose 25283 is well on its way to a return to operation in October!

### Visit from New Congressman

- Eugene Vicknair

As of January 1, 2023, Plumas and Sierra Counties were moved into a reconfigured District 3 for the California Congressional Districts. For several years, the FRRS has enjoyed an excellent relationship with the congressional office for District 1 and Congressman Doug LaMalfa, which culminated in his office assisting the society in obtaining a \$1 million grant to begin construction on our long proposed Whitman Event Building. Even though we are no longer in the district, Congressman LaMalfa has continued to assist where he can and has expressed his ongoing support for the society and our mission.

Our congressional representative now is Kevin Kiley, newly elected to head District 3. Early in the year we got in contact with his office and extended an invitation to visit the museum when he was available. His office also began assisting the society, including nominating us and providing a support letter urging that the WPRM be awarded the National Medal for Museum and Library Services, discussed in the accompanying article on grants and awards in this issue.

On Tuesday, September 5, Congressman Kiley and aide Pamela Grant were able to make their first visit to the museum for about an hour in the afternoon. Director Eugene Vicknair gave them a tour of the museum which included viewing the WP 106 "Charles O. Sweetwood", Union Pacific 105 business car, WP 0-6-0 165 and WP "Silver Plate" diner. Ms. Grant was especially thrilled with the "Silver Plate" as she had ridden the "California Zephyr" with her family growing up and had many fond memories. Congressman Kiley was quite impressed with the scope of our collection and the "Charles O. Sweetwood" and the WP 165 in particular.