

(...**Train Schedule Changes** continued from previous page)

tions. Combined, these time savings should allow all crew members a full 30 minutes for lunch.

RAL Schedule

Changes focus on consolidation and improving the compatibility of the RAL and caboose train schedules.

The existing 10:15 appointment had high usage, but its end time of 11:15 could result in delays to the first caboose train departure. Analysis showed little usage of the 09:00 appointment. The new schedule replaces both with a 09:30 start time, which should be more attractive and allow for a 30 minute gap between the RAL and the first caboose train departure. Minor overruns in this RAL slot should not cascade into multiple delays.

With the exception of Memorial Day and Labor Day, RALs will no longer be advertised for Monday or Tuesday. This will allow for a full museum closure of two days each week and should provide reliable days off for most museum staff and crew.

The new RAL schedule is as follows:

2024 RAL Season: May 25 to October 12
Wednesdays, Thursdays and Fridays, all season

Available Appointments (5):

09:30-10:30, 10:45-11:45, 12:00-13:00,
13:30-14:30, 14:45-15:45

Saturdays and Sundays, May 25 through September 1

Available Appointments (3):

09:30-10:30, 14:45-15:45, 16:00-17:00
(this schedule is also used for Memorial Day and Labor Day)

Saturdays and Sundays, September 7 through October 12

Available Appointments (6):

09:30-10:30, 10:45-11:45, 12:00-13:00,
13:30-14:30, 14:45-15:45, 16:00-17:00

My First Locomotive Inspection

- Nicholas Manos

I spent most of the 2023 operating season attempting to convince the Chief Mechanical Officer (CMO), David Elems, that I did indeed know which end of the wrench to use as a hammer. Finally, toward the end of the season, he relented and asked if I wanted to assist with an inspection of the WP 1503. I'm not sure if he needed help or just needed me to stop bugging him, but the result is the same either way.... Success!

Step one - wash the locomotive. David made a strange concoction of soap like products in the wash bucket and directed me to the top of the locomotive. He handed me a stick with a scrub brush on one end and we began the long effort of removing oil residue from all surfaces. A few hours later, we had the entire locomotive resembling clean. Imagine scrubbing a small house exterior.

Next, we used the locomotive to do a bit of switching so we could place it in the shop over the pit. Once over the pit, we opened a number of hatches on the trucks and proceeded to inspect the traction motors, gearing and axles. We checked the supply cabling and the various oil routing hoses, along with the sanding system. Brakes were inspected all the way around. David added crater compound, a pre-sized pack of gear lubricant, to the motor-axle case before we replaced the hatches and finished the pit inspection.

We moved the locomotive out and performed some more switching to open up the other side of the shop, where we parked the locomotive. At this point, David brought out the vacuum and we proceeded to clean out the cab base of dirt and sand, along with several other portions of the locomotive. Once the vacuuming was complete, inspection was made of the cab electronics, where David found a damaged high voltage relay. Repairs were made and we moved onto the engine block.

Lots of cleaning was on tap for the engine block, too. We used solvents and rags to clean the ex-



terior of the block, as well as the interior surfaces of the air box. On a two-stroke supercharged diesel engine, the air intake is not just charged for compression, the pressure is also used to clear out the combustion gasses from the power stroke. This process isn't completely smooth, so some of those combustion products end up flowing back into the air box and it makes for quite a mess.



We then removed all the inspection covers in the engine block and opened up the top deck. Inspections were performed on camshaft lobes, rocker arms, valves, injectors, various bolt and nut torque, coolant pipes and connections, piston skirts, piston rings, connecting rods, oil passages, oil lines and various bearings. It was gearhead heaven, at least until it was time to replace all the covers and clean everything again.

We changed all the disposable air, fuel and oil filter elements on the locomotive. We topped off the oil, which was a new thing for me because I had never 'added' oil from a pallet of 55 gallon drums moved in by forklift. At full capacity, this beast requires 165 gallons of lube oil.

Inspections were conducted on the main and auxiliary generators to verify brush condition and wear transfer patterns. The batteries were serviced with water and then charged to capacity.

There were several other inspections and tests performed, in addition to a number of runs to perform some tests under load, but that should provide a general idea of the amount of work that goes into a yearly inspection for these locomotives.

This process took us just over a week, which included a lot of explanation from David as he trained me on these tasks. We also made a number of repairs along the way, including adjustment of the rear cab door so it shuts without slamming, replacement of the sticking isolation switch and replacing the engine lube oil pressure gauge with a model that accurately indicates the oil pressure at all RPMs.

I used a few early mornings to troubleshoot an issue the locomotive had with its rear headlights. I know how to read electrical schematics, but I quickly found out that didn't mean I knew how to read railroad electrical schematics. After a few hours and some experimenting with the voltmeter I had things under reasonable control. The problems were identified, repair and replacement made and the headlights now burn your hat as you enter or exit the cab. I haven't timed the duration until actual hat combustion, but I believe it is well within factory specification.

I wasn't so fortunate at repairing the broken speed indicator. That system remains filled with mystery and will require some repeat visits. In addition, we still have a leaky but serviceable brake cylinder on the rear truck to rebuild and David found the cooling fan shaft bearing is... well the race seems to rotate more readily than the bearing itself. Not ideal. We have a few other small inspections and adjustments to perform that we weren't able to get to during our last session, but we will be back at it soon.

Things are looking good for the WP 1503.