

Mechanical Department Report

January 9, 2020

Acting CMO DS Elems

There wasn't much mechanical work done over December. During the beginning of the month I had to spend more time at work because of the semester coming to a close, and then we had Santa Train. I've put off Further work on WP512 until March, though we really didn't loose that much progress as we were still cleaning on the engine room and equipment; WP512 will be slotted into the queue with the remainder of the fleet during shop rotations. Currently the rotary set is undergoing annual inspections on 1 Rail at the west end of the shop and when completed will be followed up by WP1503 and SP2873. We hope to have enough snow before winter ends that we can hold another rotary plow event, and are getting the equipment ready far earlier than last year. I'll be outlining the status and planned work on all that below.

As mentioned above, we already have equipment in the shop undergoing mechanical work. As far as I know this is the earliest we've ever returned the shop back to mechanical work. Hopefully it will offset the amount of work needed to our fleet and well be able to get the locomotives run through the shop much sooner than in prior years. Steve Habeck and I had been discussing the merits of clearing the shop sooner after the end of Santa Trains for quite some time, though back in October or November I never would have expected it to happen just ten days after our last event night. I'd like to thank to Habeck family for getting the two passenger cars cleared and all the other people who've come in to help take down decorations around the museum; not only are we back to mechanical work sooner but we'll probably end up with fewer damaged light and decorations from not sitting out in the elements.

I'll also be updating the Locomotive & Service Schedule at the end of the report as usual. I've mostly finished up a work plan for the usual mechanical work that will start in March, which I'll publish when complete. In addition to working on the rotary set and the two planned pusher units, I'll also be working on cleaning the shop/tool room and filing the mechanical records in the Operations Office.

The old computer that was on the Mechanical Department desk in the office is currently down in Las Vegas with Director Matt Elems getting updated. When it returns there will be very little on it that doesn't help to facilitate departmental work, and similarly I'll be cleaning up the desk. If you've been using the Mechanical Dept. desk and drawers to store as a person stash for your tools, supplies etc. you will find that they are no longer there come the start of the season when we open; **anything that wasn't put there by either myself or Bil Jackson specifically for departmental use will be boxed up and securely stored**, you can talk to either one of us to get it back and I'll work with you on getting a proper location for storing appropriate items on site.

WP1503

WP1503 performed as well as I could have hoped during the Santa Trains, though there were a few hiccups. In addition to having a long string of leaky cabooses in the cold, there were a few air leaks found on 1503 as well as 2873 that lead to issues with maintaining air on the

train. The air leaks and remaining electrical issues will be the focus of the work while 1503 is shopped following the completion of the rotary set. I should note that the electrical issues are all minor and mostly involve replacing old worn out switches and the continuing effort to find why the rear headlight isn't quite getting the voltage it needs, and not anything major that effects usability and operation. I believe we have all the switches in stock.

Should 1503 spend enough time in the shop prior to any use on a rotary run I'll continue working on it, going over work items from the annual inspection form to help get them out of the way.

SP2873

SP2873 had some problems besides air leaks on our last weekend of Santa Trains, and like WP1503 those will be the focus during the duration that it is in the shop. Currently the cause has yet to be determined; the engine was hunting and when checked the amount of oil in the crankcase had increased an alarming amount between periodic checks though no major leaks in the system could be found. I suspect that there was either a clog in one of the lines for the governor and/or load regulator, that the oil filters need changing, the suction strainers need cleaning, or all of the above. My initial suspicion had been that one or more injectors had given up the ghost and we were dumping fuel into the crankcase but that luckily wasn't the case.

I had shut the engine down just to be safe, which preceded one of Santa Train's timeless staples, the dumping of the train air. WP1503 wasn't able to pump the train back up on its own so I put 2873 back online. What ever was causing the issue with the oil system seemed to have passed as the oil level stayed were it was supposed to be for the rest of the night, and the engine didn't hunt quite as bad.

Like WP1503, I'll start working on annual inspection items should SP2873 spend enough time in the shop prior to its use. Initially I'll be fixing the air system issues and combing over the fuel and oil systems.

SPMW 208 & 8221

As mentioned several times above, the set is in the shop. I've got 70% or more of the annual inspection work completed, the majority of that being on SPMW8221 (the power snail). I'll be completing the electrical inspections on Saturday (1-11) and Ethan Doty and I are planning on pulling the batteries for servicing on Monday (1-13). Before it the snail can be started up we need to complete the inspections to the airbox and crankcase. There are also a lot of little things to be done as well like changing the air filter media and cleaning out the carbon traps on the exhaust manifolds but those can be done after a test run of the engine if need be.

Should the weather this upcoming week not be too bad, I expect we may have both the 8221 and 208 completed by the end of that week (1-18). Once the rotary set is out of the shop both WP1503 and SP2873 will be put in, with the plow set just outside the shop. If things get really deep, we'll have the ability to just pull right out of the shop and hook up to the plow equipment to start plowing.

Non Locomotive Work

Currently the white forklift and golf cart have a flat tire each, which is pretty typical this time of year. Please remember to do all the regular checks on equipment prior to its use as you would during the open season. I've done nothing with the green Dodge since November, and I doubt anyone else has either; it will need some work in the spring and I plan to get to it around March if I have the free time. *Please do not try to start the Dodge by using an excessive amount of starting fluid.* The yellow gas powered forklift is still out of service.

In addition to the locomotive work currently ongoing I'll be working on cleaning the shop, primarily the tool room, machinery bay, welding bay, and back bay/area where the deep sink is located.

This Month & Beyond

Once I've finished adding things and finalized everything I'll be posting the full rundown on the scheduled work that will be starting in March. It will primarily involve the usual annual inspections to the locomotives, the inspections and work/restoration of WP512, and probably the most essential rubber tired equipment.

We are still waiting for the ram to the yellow forklift, so it is still out of service. Once it is back in operation we'll probably be pulling the white forklift from service as planned.

Inspection & Service Schedule

The current rotation of locomotives through the shop is as follows, effective dates for individual pieces of equipment after March are currently non-projectable:

1. SPMW208: Annual inspections and preparations.
2. SPMW8221: Annual inspections and preparations.
3. WP1503: Minor repairs to air and electrical systems, preparation for rotary use.
4. SP2873: Minor repairs to air systems, inspection of fuel and lubrication systems, preparation for rotary use.

March Work Schedule

1. SP2873: Annual inspections.*
2. WP1503: Annual inspections.*
3. WP512: Cleaning and inspection/evaluation. Annual inspections and additional inspections and maintenance required for return to service. This will be concurrent with all other shop work.
4. QRR1100: Annual inspection.
5. WP2001: Annual inspection
6. WP707: Injector work and annual inspection. Pending acquisition of injectors.