

Mechanical Department Report

April 9, 2020

Acting CMO DS Elems

Mechanical work continues to be slow. I've only been getting to the museum about once or twice a week. This is due in large part to not having a vehicle with which to commute. There is also the issue of COVID-19, which will be discussed at length in this month's Board Meeting. I'll get into how the Mechanical Department and our scheduling is being effected below. However, the increased time at home has allowed me to catch up on some of my tool and parts designing as well as having plenty of time to read through the maintenance manuals and plan ahead for this season's projects. It should be noted though, as mentioned in the March report, that the scope of what I had planned to accomplish has been drastically reduced, and there remains the possibility for further reduction. I'm also working on a plan for scheduling specific times during the week for when mechanical work will occur, who will work on what, and what procedures need to be followed to maintain the health and safety of our volunteers while we continue to work around the museum. It is going to be interesting to say the least, as there are always mechanical procedures requiring the "two worker" rule in order to be safely completed, and frequently personnel end up needing to be closer than six feet.

That all said, there has been some positive progress made on our locomotives. We continue to chip away at the remaining work items on SP2873, and on March 25 WP1503 was started up in the shop. Overall there are no new issues with 1503, and we managed to trace the cause of the smoking front exhaust stack; the #1 injector. I expect it has some carbon fouling which is causing issues with the spray pattern. The annual inspection wasn't completed on 1503 until late in the 2019 season, so we still have a few months before the next one is due. By the end of this summer we hope to have all the little issues sorted out and all the remaining labels, stencils and decals placed on the exterior of the locomotive.

I have also introduced a slightly modified locomotive inspection form (Form M1001) earlier this spring, which is now printed on pastel teal paper. Copies located in the usual spot in the blank forms section of the Operations cubbies on the desk outside the office. All the old forms have been disposed of, and the next time I'm at the museum more teal copies will be placed in the locomotives. There should be plenty of copies on the colored paper for this season, and I'd like for people to avoid printing the new form on white paper. This is part of easing how I track the paper work, and will help me narrow the inspection records down to this year when someone inevitably forgets to write the date on the form before turning it in.

Maintenance Work & Scheduling

Starting next Tuesday (April 14) I plan to start a scheduled work rotation. Mechanical work will be done twice a week; Tuesdays and Fridays. This is an effort to minimize contact between personnel (person to person) and the shop (person and environment). Outside those days if you want to work on certain projects please contact me. Use of PPE will be discussed in the meeting, and the decisions on how we will proceed will be posted in the requisite areas.

Work will be prioritized and assigned to try and maintain social distancing amongst personnel in accordance with the most current guidelines; such work as that which can be completed by an individual or allow proper physical separation of personnel. Any work that will require multiple people should be well planned out and discussed ahead of time. If you feel ill, stay home. If you have been in contact with someone that is, may be or has been ill, stay home. If you do not specifically need to be at the museum for the basic upkeep of the museum, it's equipment, or the grounds, please stay home.

There are only a few new projects that are currently planned for this season, which are bulleted below. How we proceed with the scheduling is increasingly tentative, with mid-May being the earliest we'd start on any of them. Currently we are running through the annuals on the primary "operational" locomotives.

- **WP707:** Currently 707 needs new injectors, a project originally slated for last season which we chose to put off in favor of getting WP1503 back in service. Additional parts may need service such as the airbrakes, specifically the feed valve. Once back in service 707 will help take some of the strain off SP2873.
- **WP512:** We haven't had the time to continue the evaluation of 512 since other projects have taken priority this winter, but I plan to resume our efforts once the annuals are finished on all the serviceable locomotives. Once operable 512 will take the strain off QRR1100.
- **WP731:** To the best of my knowledge, 731 had a problem with the reverser which was fixed but needs to be wired back up. This will need to be evaluated and should that be all that is needed then it should hopefully prove to be a quick and simple matter to get 731 back to an operable status. It hasn't run for quite some time, but should hopefully be able to operate with minimal effort for a season which would take further strain off SP2873. Ultimately it will need all new injectors just like all our EMDs, but the extent of any injector leaks is currently unknown. An oil change would also be prudent.

Non Locomotive Work

We hope to catch up on the much needed work on our "rubber tire fleet." Alas, we have quite a few pieces of equipment, all in need of something. Like the rail equipment, what I'd hoped to work on this season is going to get cut back, with the essential equipment being prioritized.

Plans are being made on maintenance and repairs to the backhoe, various forklifts, and green dodge. With any luck, all the electric forklift needs is a new battery, though the rear wheel will need to be dealt with relatively soon; as long as we take it easy and *keep the lift in the shop* it should last us a little longer.

The white forklift will hopefully have new leaf springs by the beginning of May. I'll be making some changes to the electrical routing of the auxiliary wiring for the lights, strobe etc. I also hope to change the flood and headlights to LEDs. I'm not sure if we'll get around to the rebuild/overhaul of the engine this season. I expect the need for the white forklift to be fairly

light this year so it should be good for another year when things are hopefully more certain. If we can get the Yale forklift back in operation the need for the white lift will be drastically reduced.

This Month & Beyond

Scheduling for current and future work has been problematic as travel and other restrictions continue to evolve around the COVID-19 issue. Supply and shipping of various “everyday” items has become a major issue as I’m sure many of you have experienced, the same issues are faced with the parts and supplies needed to keep the museum and its equipment running. For the moment we seem to be doing alright and I expect we’ll be able to work on the scheduled projects and continue to keep up with the routine maintenance and chores around the museum. As usual, the current rotation of locomotives is listed at the bottom of the report.

As things change and as we have any updates to the situation here, or the progress we are making, we’ll do our best to keep our volunteers and membership informed.

Inspection & Service Schedule

The current rotation of locomotives through annual inspections and return to service in order is as follows, effective dates are non-projectable:

1. SP2873: Complete final items for annual inspection.
2. WP2001: Full annual inspection.
3. QRR1100: Full annual inspection.
4. WP707: Change injectors, full annual inspection required. Feed valve may need work/repair/replacement.
5. WP1503: Full annual; likely mid-summer. Some remaining issues to fix such as the dim rear headlight and sticky isolation switch.
6. WP512: Ongoing concurrent project. Continue evaluation, full annual inspection if evaluation goes well.

April 2020:

Bil Jackson:

To the BoD,

I have been in email and text contact with David Elems discussing the funds that's needed next year for rubber tire fleet. I believe he will present a financial requirement for the next season. He is interested in being prepared should we be available to continue regular business as usual. As for me, I have nothing to add at this time. Hopefully we will soon be back to some normality. Bil