

# Mechanical Department Report

## August 9, 2019

### Acting CMO DS Elems

Coming off the heels of last month's progress we've continued to complete a lot of work both to our equipment and around the museum. The painting is mostly complete on WP1503, lots of work was completed on WP165, and we just had a successful WP History celebration last weekend. Seth continues his work on WP501 and I've been working with A-1 radiator on the 1503 project. Segueing off that, Roger Stabler has brought up four "triple-length" banks of radiator cores in both four inch and six inch sizes; s massive boon to the plans and capabilities of the Mechanical Department.

I hope that we can continue the momentum of the previous months. With the success of the work on WP1503 (so far) I've decided to try and fit in some "minor" work in on top of what I had originally intended to be time spent almost solely on WP512. I hope to get the cores that Roger supplied tested and cleaned before the end of October, as they will play a major role in what I have planned from now into next spring.

#### **Radiator Work: SP2873 & WP2001**

While SP2873 has been soldiering on as usual, the radiator leak continues to be a steadily, if slowly, escalating problem. With the radiator cores that Roger has brought up I hope to be able to remedy the problem before the end of the season. My preference would be to have a new bank of radiators swapped in before the Santa Trains with November being the my target window for the work.

WP2001 has continued to be a reliable source of motive power aside from the radiators. Once that particular issue is dealt with I think that 2001 will be one of our most reliable locomotives alongside SP2873. The radiators in 2001 should be six inch thick cores like what's in the GP9's (SP2873 & WP725). With what Roger has brought up, what's in WP725, and the single length cores in the CMO boxcar I hope to be able to deal with the radiator issue plaguing 2001. I currently plan to do the swap sometime next spring.

#### **Non Locomotive Work**

Bil Jackson, Ethan, and Vince have continued to work on the so called "rubber tire fleet" with lots of work on the golf cart by Vince. I've talked with Bil about the required work on the backhoe, particularly the left outrigger ram. He's written up a report on that which outlines the problems encountered, the solutions, and the costs in getting things fixed.

The electric forklift is experiencing what we believe to be low voltage issues and we suspect that the batteries are finally calling it quits; considering they are as old as they are I'm surprised it's taken this long before they finally became a major problem.

## **WP1503**

The majority of the painting has been completed on the locomotive, with just some touch ups and painting of the handrails and grab irons which is to be done with brushes and rollers. A big shout out to Roger Stabler, Greg Elems, Mike Waters, Ethan Doty, Steve Habeck, Jason Peterich, Matt Elems, Ken Finnegan and everyone who helped with the prep and painting.

At the moment I'm holding off on putting the batteries in until next week, and the shutters and front grill will be left off to facilitate easier access to the front radiator tank/header piping flanges. I'm still waiting to hear back from A-1 on arrival of the new core. I was in contact with them over the two weeks leading up to August 2 with pricing and core availability.

We decided to go with one large "triple-length" core (roughly 84 inches) instead of a single and a double like what was originally furnished and will be mounted on the right side of the locomotive. The primary reason for this is that they are the more commonly used now and are almost \$1200 cheaper than a double length core. The single length core that I sent in was also in rough shape and packed full of rust, so we'd also have probably needed to shell out money to get a new one of those as well. So while not staying true to the original setup, we still saved quite a lot of money, and in the long run it's likely that the railroad(s) would have made the upgrade anyways. I'll include the latest price quotes from A-1 for both radiator core sizes in separate attachments (Est\_Q12141 & Est\_Q12321); A-1 was unsure of our tax status and included sales tax. The actual cost for the route we went was \$5,997.00 all said and done.

## **Next Month & Beyond**

With work on WP1503 coming to a close I'm looking to our upcoming projects. WP512 is still slated to be the next major project but I hope to be able to do some concurrent work with other locomotives now that the WP History Days celebration is behind us; i.e. 2873's radiator work outlined above. With the lifting rig and procedures in place from working on 1503 I'd like to try and get the leaking radiator situation with SP2873 dealt with before the annual Santa Trains this December.

I'd also like to try and get WP707 dealt with before the end of the season, preferably before the Pumpkin Train celebrations; If the injectors can be replaced and timed and the full annual inspection completed it would be late enough in the year that a full annual shouldn't be needed next spring and all we'll need to do is some basic post-winter inspections.

Once things have been wrapped up with WP1503 I'll be submitting a work plan for WP512. I expect that 512 will require a lot of shop time as we thoroughly inspect it. Between the maintenance documentation at the museum, in my own files, and what Phil Schmierer has been scanning and sending me I'm pretty sure we have everything we need for a thorough evaluation and complete inspection.

There are also next spring's annual inspections for the usual locomotives that we should start thinking about as soon as possible. If feasible I'd like to start moving things through the shops sooner rather than later, as the past several years have seen the annuals starting at such late dates that it impacted locomotive service availability.

## **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. WP1503: Needs radiators installed, finishing of the annual inspection, fuel injectors and rack adjusted.
2. Inspect and evaluate WP512 for viability. If close enough to being operable it will need a full annual and wheel work.
3. WP707: Full annual inspection and complete injector replacement (will necessitate timing and adjustment to injectors and fuel rack).
4. SP2873: Swap leaking radiator bank with good radiators (following evaluation of new-to-us radiators).