Mechanical Department Report
July 12, 2019
Acting CMO DS Elems

In the last month we've managed to accomplish quite a lot. Two locomotives have been placed into service and work is progressing along nicely with WP1503, and our two forklifts and the telehandler have had their safety devices fixed/upgraded or added new. There is still quite a lot of work to be done, though that shouldn't come as a surprise to anyone as that's par for the course. In addition to finishing up the current lineup of departmental work I'm looking forward and planning what will be coming up next, plus planning the needed machining work for some of the components on WP165. It is looking as though the shop will be busy well into the end of the operating season of the museum if not beyond. I'd also like to welcome a new member to the society and the Operations and Mechanical departments; Vince Bonfiglio. He's been a huge help around the shop and helped with a number of projects.

QRR1100 & WP2001

Chief among the Mechanical Department projects during the past four weeks has been returning QRR1100 and WP2001 to service. The nightmare of dealing with the batteries in 1100 looks to be behind us and the batteries from WP917D seem to be doing just fine in WP2001. With the help of Ethan Doty the battery boxes in 1100 were cleaned out, and Ethan cut and installed new wood lining. I'm confident that we'll be able to get through this season without many issues with 1100, though some recent things have cropped up that need to be monitored (air compressor control circuit) and the state of the liner seals will have me on edge once the temperatures plummet at the end of the year.

WP2001 went through the annual inspections with only a bad relay giving us a problem, which was brought up in last months report. A big thanks to Ethan Doty for spending several days probing the electrical cabinet with his volt meter; the issue seems to have been a failed coil on the old ER relay. With his help I pulled the ER relay from WP725, and Ethan and Vince installed it into 2001. WP2001 has operated two rentals since being put back into service and the last one was with the new relay which performed as designed. Going through our parts cars I think we may have more general use relays in stock so getting something back in 725 shouldn't be a problem.

Non Locomotive Work

Bil Jackson, Ethan, and Vince have been working on the so called "rubber tire fleet" and getting them "up to snuff." In addition to the general maintenance that is required the forklifts have had their safety appliances such as horns, strobes, lights and reversing alarms fixed (if found inoperable or disabled) and in a few cases added on new. A more detailed report on that line of work has been submitted by Bil. It has gone a huge way to getting the safety requirements taken care of that have been left on the back burner for too long. As an aside, all safety devices are provided for a reason and under absolutely no circumstances are they to be tampered with or disabled by anyone.

WP1503

Work has been progressing steadily on WP1503. I think the majority of the annual inspection work has been completed. At the moment the locomotive still sits in the shop on 1-rail under the hoist rail awaiting the removal of the radiators. The annual inspection items that still need to be completed are the pit work and the coolant system checks. The locomotive will be put over the pit once the radiators have been dealt with and the pit inspections should only take about 30 minutes with a couple of people working together. Once the radiators are installed the coolant system checks can be completed.

Last Wednesday (July 3) Ethan, Steve, Vince and myself got the batteries removed from 1503 and over the past week they've been cleaned and serviced; they were found to only have around five volts between the two of them when we first spotted the locomotive in the shop. They've come back nicely, such that yesterday afternoon we ran jumpers from the batteries on pallets into the cab and completed the necessary electrical and fuel system testing; again a big thanks to Bil, Ethan and Vince for the help. Aside from the front headlight not working which we knew about, nothing was found to be amiss. To that end we flashed the engine and then started it, shutting it down after about 15 seconds; Greg Elems got video of the flashing and start up. The front headlight switch was found to be fried, and I found a new one in one of the parts cars and installed it with Ethan's help.

Today I finally got the remaining bolts out of the inlet and outlet flanges to the left bank of radiators, and all the like bolts on the right bank of radiators are loose and ready to be removed. I also pulled the front grill and prepped the shutter assembly for removal, both if which will be painted off the engine to allow access the fan and shroud as well as being easier to clean and prep off the locomotive. Next week we'll pull the left bank of radiators and take them in to A-1 Radiator in Reno. The right bank will be pulled and turned end-for end, and we'll need to swap the end headers; this is because when we installed the right bank we matched them to the improperly installed (by UP) left bank when we did radiator work five or so years ago. Once turned the cores will be properly supported in the car body support brackets.

Scraping and sanding of WP1503 has been ongoing, and there is still a lot left to do. If you are around the museum, want to see 1503 painted sooner rather than later, and also looking for something to do then I encourage you to help prep the locomotive for paint. There should be several volunteers around the museum that can get you oriented on that.

Next Month & Beyond

Hopefully this time next month I'll be reporting about how "bitchin" 1503 looks in fresh Perlman Green paint while operating around the museum, and also giving an update on the staging and prep work for WP512. So far I've purchased new carbide cutters for the in-pit wheel lathe in preparation for turning the wheels back to something resembling AAR standards. If time allows I also hope to get the annual inspection and injector work done on WP707 before the end of the operating season. As usual, I've included on the last page the most up-to-date work schedule for the Mechanical Department as of this writing.

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 replaced, 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).