Mechanical Department Report
October 11, 2019
Acting CMO DS Elems

My apologies for getting this typed up and submitted so late, not to mention the absence of a written report last month. My position at TMCC changed, and with it came new hours. We've managed to get a lot done since my last report in August, but as always there is still a lot to do. Our tired forklifts have finally gotten to the point were we must do some minor overhauls and component repair/replacement, our two pickups are continually having new gremlins crop up, and then there is the usual running maintenance on the locomotives. We've started transferring the fuel from WP917-D to the fuel car so it can be better utilized in other equipment. I've also finally started machining some of the components for Roger to go on WP165 as well as some of my engine tooling, but it is slow going since it has to be done when I have some free time at work which is pretty rare unless I go in well before classes start.

I went up to Alturas, CA with Greg Elems last weekend to pick up some donated equipment from one of our members, which went without incident aside from some minor issues with the Dodge which I'll bring up below. I've continued to clean and poke around on WP512, and have started planning for work on the SP rotary plow to get it ready for this winter season. While our operating and visitor season winds down, precluding our upcoming special events, this time of year typically sees a lot of the work being done that the busy summers sometimes don't allow.

WP1503

We ran into a snag during the injector and fuel rack class that I had scheduled. In order to properly check the timing of the flywheel to the rest of the engine the injector on the number one cylinder must be pulled. Unfortunately the injector crab nut that holds the injector to the cylinder head wouldn't move under sufficient torque and rather than shear the stud on the injector or strip the threads off it I decided to move on to the rest of the class. While putting the oil jumper from the rocker arm shaft to the camshaft bearing one of the ¼-20 screws sheared in half, preventing the jumper from being properly secured. The screw sheared while being tightened with a torque wrench at well under the specified torque range so it is likely that it wasn't long for this world anyways, likely from repeated over tightening. I bought some new drill bits, and once they arrived Bil and I were able to extract it without any problems and get a new stud secured. Unfortunately this took a week, so the class was put on hold. I hope to replace all similar jumper screws in the spring with new stock so that doesn't happen again. I'd also like to give the class again either later this month or more realistically in the spring.

WP1503 got the last bits of exterior painting completed at the end of September, and has been run through its paces (for the most part). A big thanks to Mike Waters for finishing off the grab irons, handrails and stanchions. After our big switching move at the end of September we took advantage of the cool and wet weather to fire up 1503 and pushed/pulled SP2873 around against its dynamic brake. The stacks cleaned up a bit and we managed to clear out a good bit of crap from the manifolds. We did experience some issues with the reversing relays early in the evening but I think I've gotten things resolved.

Overall things performed as expected, and it should make for a great unit on the Pumpkin and Santa trains this year. I think one of the only things left to figure out is the one dim headlamp on the rear of the locomotive, not that it makes too big of a difference since 1503 has dual seal-beams and ditch lights on both ends.

Radiator Work

I have yet to get anything done on WP2001 or SP2873 in regards to their leaking radiators, nor have I tested any of the cores that Roger Stabler brought up. I still plan to test the cores and hopefully get to 2873 before the end of November. 2001 will have to wait until next season.

Non Locomotive Work

Lots of maintenance continues to be done to the non-rail equipment. Bil Jackson submitted a report on this for this last month's work. A lot of this work is being handled by Vince Bonfiglio who typically comes in just two days a week, but you might not know that based on the amount of work he's been able to do on the vehicles. Thank you Vince, and to everyone that that's been working on the so called "rubber tire fleet" which too often is taken for granted.

A quick update on the yellow Yale forklift since Bil's report. Bil has been in contact with Roger, and it would seem that we are having trouble finding a place to do the re-chroming of the shaft for the steering ram. If I am remembering correctly from this afternoon, Roger has found some possible replacement rams down in the valley. Hopefully a more detailed update can be given tomorrow in the meeting. Once the Yale is back in service we should be able to safely and comfortably pull the white forklift from service in the spring to overhaul it as planned.

The green Dodge continues to be a headache, at least for me. It continues to loose its fuel prime if left to sit for too long, with that interval seemingly getting shorter every time it needs to be started. Bil and I have discussed it at length, and we have a few ideas of what to go poking around for. The latest issue to plague it was the power steering pressure hose, which developed a pinhole leak sometime recently. The last few times I've used it I'd noticed while looking into the engine bay that the power steering hoses looked oily as did some of the surrounding components, but nothing was "wet" with fresh oil. This changed during the trip up to Alturas last weekend, when after arriving at the hotel I popped the hood for a post-drive inspection.

The area around the power steering pump and its hoses was significantly oiler than when we'd left Reno, with the steering column which is right under the pressure hose being quite oily. Alas things still weren't "wet" looking so I decided to show it to Bil when we got the truck back to Portola. To keep a long story short, we discovered a pinhole leak, went by the Alturas Napa on Saturday morning for power steering fluid and engine cleaner, and after topping things off we never had any major problems. As long as you don't crank the wheel hard in either direction the leaks isn't very bad, so the highway driving from Alturas to Reno didn't see any appreciable loss of fluid in the reservoir. I've since bought a new pressure hose which still needs to be installed.

Next Month & Beyond

I'm continuing to poke around one WP512. Things aren't cleaning up as quick as I'd hoped and some help in wiping down the engine block would go a long way to speeding things up. The cleaners and diesel have softened up even the heaviest deposits of sludge but it isn't just washing off, though luckily it seems to wipe off with a rag or bare hand quite readily. Once I get things cleaned up I'll be able to get a proper look for and old cracks or leaks on the block and heads, which initially look to be in very good shape. I should have a better idea of scheduling for the inspection and work in the coming week or so, which will involve some work on top of the usual annual inspection such as checking shaft alignments for various components, checking gear train backlash, condition of main and crankpin bearings, etc.. I'll include a full list of extra work with the schedule once I get it figured out and released.

We are also gearing up for getting the SP rotary in operable status for the winter season. Tomorrow we'll be putting it over the pit for an underside inspection of the frames, trucks, etc. after which it will begin undergoing an annual inspection. I'll be organizing scheduled inspection days, assigning certain sections from the annual inspection worksheet for the snail (b-unit) to various dates throughout October and possibly November so as to allow people to come up and learn the procedures we use for inspecting our locomotives. This will also be done for WP512. I'm also going to be working with Etan Doty and Charlie Spikes on getting a worksheet put together for the A-unit.

The event with the rotary this March went very well despite the late date and minimal snow, so our hope is that we can have rotary ready for use a little earlier this winter, not just for possible events but to have ready for use to clear our trackage should the need arise.

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. SPMW208: Annual inspections and pre-winter preparations.
2. Inspect and evaluate WP512 for viability.
3. SP2873: Swap leaking radiator bank with good radiators (following evaluation of new-to-us radiators).