

# Mechanical Department Report

## Board of Directors Meeting: January 7, 2022

### DS ELEMS

Things haven't gone at all as I'd hoped over the previous two months. The white forklift is still out of service, snow storms have limited access and work, and snow removal has taken up most of my time spent on site. I hope to get things back on course next week.

### Forklifts

As stated above, the white forklift is still out of service. FedEx's less than stellar shipping delayed receiving the new master cylinder an extra week from when it was supposed to arrive. By the time I got them to route the package to a local pickup location and acquire it the first of December's big storms was already bearing down on Portola. Luckily the new part is a direct replacement for the clutch master cylinder and will bolt right up, so the actual process of completing the repair should go fairly smoothly.

I've also acquired a shop service manual reprint for the Ford Industrial 134/172/192 engine, which will aid us in completing the repairs and adjustments to the engines in the white (Lift-All) and yellow (Yale) forklifts; I hope to start this work in the late spring. Other work on these lifts this spring will include continued work to the steering ram on the Yale, new leaf springs on the Lift-All, and some minor electrical work on both.

The Loed needs hydraulic work, which I hope to start working on whenever things dry out were it's parked; primarily replacement of hoses on the steering and rear drive control lines and renewal of some of the boom control feed lines. The work will require that all the hydraulic oil is drained out; I'll take advantage of this to affect a fluid change and add all new ISO 68 fluid.

### Case 580C Backhoe

This coming week the backhoe will get a fluid change. In fall 2021 Ethan Doty changed the engine oil and replaced the engine oil and fuel filters, but the drivetrain fluids are in need of changings. After clearing snow following the first large storm last month I found the transaxle oil level to be low with moderate water inclusion.

The transaxle/gearbox will be getting flushed and refilled with an API GL-4 gear oil. We've been using GL-5 80w-90 gear oil from Napa for as long as I can remember, and with how little we run the backhoe I don't expect there has been any issues and the drivetrain seems to perform fine without any indication that there is damage to the clutch. That said, I'd like to keep things that way hence the change to the API specification given by Case. I'd also like to change to fluids in the power shuttle and power steering to something that meets the Case specification.

### Locomotives

With the weather last month, we haven't been working on the locomotive fleet. Once some of the issues with the rubber tire fleet is completed, I hope to get back to finishing the work on SP2873 and rebuilding the low water shutdown device for 1503.

QRR1100 will need a quick once-over before being placed back into service. Prior to this last week the temperatures in Portola had been frequently dipping into the low single digits. There is the chance of leaks at the lower liner seals that needs to be checked for to make sure we haven't gotten antifreeze in the oil pan.

## **Upcoming Mechanical Work**

At the moment we're waiting to see how the rest of this winter and the spring will go. Besides what's mentioned above, the only work in the upcoming months will be getting 2873 back in operation and the usual annual inspections this spring which are likely to start in March.