

Mechanical Department Report

October 11, 2017

Acting Asst. CMO DS Elems

There isn't much to update for this month from anything we discussed last meeting in terms of locomotives. The past three weeks did see a marked level of progress in repairs and work on our rubber tire equipment though. We have identified a tool that would be beneficial to the operations of the department.

Locomotives

WP GP20 2001

We are pretty well ready for the planned work on 2001. The procedure isn't very complicated for what we need to accomplish. As of right now we are waiting to hear back from Hatch & Kirk on the order but I believe it should be arriving soon. I'm pleased to say that we managed to get a great price reduction on the order after CMO Jackson talked with them; from \$2654.24 for 16 injectors to \$2619.95 the injectors *and* three of the critical tools needed for the job. All in all we saved roughly \$40.00 per injector, \$79.00 on the injector rack gauge and \$8.00 on the injector timing gauge from our first quotes with H&K. I fabricated the governor jacking tool that was needed position the fuel control linkages for the rack adjustments; upon the arrival of the H&K order we will have all the required tooling to properly set and adjust our EMD injectors.

QRR TR6A 1100

As of the writing of this report QRR1100 is temporarily out of service. There were some issues with the air system and air brakes today. When I finally got over to the museum CMO Jackson and Director Spikes fired up the engine and the issues with the air reservoir not pumping up seemed to have gone away though the automatic brake and associated systems are still wonky. I suspect there are some dirty valves in addition to worn and/or old diaphragms and seals/gaskets causing things to hang up and leading to the air leaks at the stand; i.e. the stuff is old and worn out. I'll see if I can get over this coming Friday to work on it but I suspect we'll be fiddling with it all weekend at the least.

The valve seats on the solenoid valve of the air compressor loader/unloader circuit are leaking again so I'll deal with that the next time I'm over be it Friday or this weekend. The rear headlight circuit and resistors are in need of adjustment again. I've discussed this with Duane Vander Veen in regards to both QRR1100 and SP2873 with and I believe the general consensus was that either the old style 32vdc resistors aren't aging well, the resistors keep getting adjusted by people or the voltage regulators need to be adjusted (again).

Other Equipment

An unidentified friendly mechanic (UFM) spent two weeks with us at the end of September. As a result the maintenance and planned work for much of the rubber tire fleet was completed. I can't thank him enough for the work he was able to accomplish and the help and advice he gave.

Little Giant Truck Crane

The truck crane is running again, to include the engine and controls of the crane house in addition to what CMO Jackson was able to accomplish last season in regards to the drive engine. The brake issue has been dealt with and the machine lubed and serviced. There may some things left such as auxiliary external lighting to be worked on.

Now comes the part of training [re]familiarization of the equipment for our operators.

International Harvester Loadstar Dump Truck

The dump truck was worked on and made operational again. Maintenance and lubrication was performed. The concrete was removed from the bed.

Forklifts

Both the electric forklift and Big White have been worked on. The electric burst one of the side hoses for the side-shift and was repaired by CMO Jackson.

Big White had work done to the transmission. I'd like to thank CMO Jackson and the UFM for dealing with that mess while I was busy with work in Reno. Water had gotten into the transmission again because the forklift had been left outside during several large rainstorms. Definitely a reminder to bring Big White inside the shop if heavy rain or snow is expected.

F250

The brown ford pickup had some work done on it as well most notably the reapplication and adjustment of the parking brake.

Tools

Torque Wrench

A couple months back the museum purchased a torque multiplying wrench to facilitate any future "heavy wrenching" work. An adjustable torque wrench of the proper drive size would greatly compliment the torque multiplier. I found such a wrench for a decent price of \$300.00 from Northern Tool that will more than adequately meet our current needs with a 100-600 ft-lb torque range. It's the best price I've found so far for similar micrometer wrenches, which typically seem to start in the \$500.00 range (for anything worthwhile) when bought new and go up from there. My brief research shows that it seems to be a decent quality tool. It would allow us to finely control the output of the torque multiplier from 300 ft-lbs up to the 1800 ft-lbs required for tightening the head crabs on the EMD 567 engines.

Miscellaneous EMD Tooling

I should finally be able to start fabricating the lifting and pulling tools for the various engine components in the next couple of weeks. Such tools would be lifting tools for heads, liners and complete power assemblies and the long awaited water pump tools.