Mechanical Report - December 2025

This report of mechanical progress and equipment status as of December 10, 2025. This includes all changes since the November 2025 update.

Given our lack of personnel, I have been working to streamline the annual as much as possible, with a goal of completing one diesel locomotive in 40 man hours. To that end, a new annual procedure has been drafted. I included a draft with this report. It is intended to:

- Allow for a logical physical flow - less backtracking
- Facilitate more than one person working the locomotive at the same time on different tasks
- Contain all instructions and reference data a mechanic would need, and only that which is relevant to the specific locomotive
- Show what tools are required for each task to enable rapid prep work
- Document all service parts and supplies required for pre-order and staging

I have also been stocking up the various repair parts we are likely to need to make sure no simple job has to be put off for lack of parts. Parts and supplies have been consolidated and moved into the mechanics bay, eliminating the need to visit various boxcars during the work session.

We'll see how much it helps in April.

Mechanical Status

- There have been no changes in support fleet status. I am still waiting on receipt of a new credit card to call for a service on the electric forklift axle

- **QRR1100 - Out of service**
  - Scheduled to remain out of service in 2026 to allow for several repairs
- **SP2873 - Out of service**
  - Scheduled for annual maintenance in April to be placed in service May 1
- **WP1503 - In service**
  - The centrifugal air filter drain valve is sticking again, resulting in a air leak heard on the right side of the locomotive. We noticed this when we were up after Thanksgiving, but elected not to rebuild it until we have the filter replaced, which we believe is the source of the contamination. I just received the filter a few days ago. We will repair in the spring

- **WP707 - Out of service**
  - Ethan had the batteries charged when we arrived November 22nd to attempt a start. We began by watering the engine. When the water level reached mid engine, it began to rain in the crankcase from leaks in lower liners. Seven liners in total were leaking. We drained water and tightened all crab nuts to spec (several loose) and this sealed up all but one, which continued to have slight seep. We elected to move forward and see how that liner did under load so we applied water again. Once the water level reached the top deck we had streams of water out of two cylinder heads and a significant leak out of a third. We drained the water and aborted the restart attempt. This engine may have been in good shape when it was idled, but the years don't seem to have done it any favors. Parts have been ordered to change head gaskets and seals, as well as liner seals
  - We were able to pressurize the fuel system and confirm there were no leaks. The fuel glass was nice and clear once the initial air purge. This is a good sign for the injectors, although we will still be on guard for leakage at the plungers under operation
  - We have started fabricating some tools. A valve spring compressor is completed. We are now working on duplicating the museum's sole liner jack, as we need 3, depending on which cylinder we work on. We are also looking at solutions for a hoist to remove heads and liners safely

- **WP805A - Out of service**
  - 805A scheduled for work following QRR1100's return to service

- **WP165 - Out of service**
  - We are still waiting on FRA contact information before we can begin investigating regulatory status

Finance

- The 2026 budget process has not completed. The Mechanical department budget request was submitted August 1. Once the board adopts a budget I will finalize plans for next year

Labor

- We have yet to gain any new mechanical department volunteers. We are talking with all visitors that show interest and have a few candidates, but so far nothing concrete. A few of our current operations volunteers have indicated they will contribute to the spring mechanical session. We may be able to field three operational diesel locomotives in 2026, but any steam operations in 2027 are out of the question

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