



THE TRAIN SHEET

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Preserving "THE FEATHER RIVER ROUTE"

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A Milestone for the WP 165

Roger Stabler - WPRM Steam Department



David Elems and Roger Stabler making sure the safety valves are tight before any pressure was raised in the boiler.
- Photo by Eugene Vicknair

I have not commented on a lot of the work going on with the WP 165 since our September work session. This summer we have been putting in extra time compared to years past. I have been spending almost every other week at the museum during the months of August, September and October to help get the WP 165 ready for what would become our test fire in November.

Now let's back up a little, I retired from Union Pacific in July, which has given me a lot of extra time to spend at the museum. I spent the latter half of July at the museum working on a lot of the small items on the engine that needed attention I was joined for several days by steam team (continued on page 12...)

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member Channing Walker, Erik Olson, Mike Waters, Steve Lee, Charlie Spikes and David Elems. We worked on gasketing the water system from the tender to engine, getting the lube lines on the engine and getting all of the brake rigging installed and adjusted. One of the major items was the throttle and stand which leaked profusely during our first hydro attempt, we found some items not fitted properly and after another go with grinding compound and a lot of sweat, we felt we would be tight for the FRA hydro static test. We scheduled the FRA for a hydro test in September.

Our September work week started off with the fires burning around Portola which led to a smaller work force until it was known that Portola was out of danger. I went up to the Museum on the 4th of September and was joined by Channing Walker, Steve Lee, Charlie Spikes and David Elems the next week. Since we were for the most part ready for the FRA on the 9th of September for our hydro static test of the boiler. We spent most of the week getting the rods and other heavy items of the running gear out of the boxcar. The engine was filled with water and our propane warming burners were put into the boiler to bring it up to the required temperature range for a hydro test. The FRA arrived on the 9th and the boiler was brought up to pressure for the FRA and all necessary testing of stays were completed.

Unfortunately, what did not leak in the May hydro test that we did for ourselves decided to leak during this hydro test. The FRA came back on the 10th and an internal inspection was performed on the boiler. Due to the leaky tubes in the firebox and smokebox along with a turret valve bonnet that decided to leak during this hydro the FRA requested repairs be made and a second hydro be performed at a later date.

I was able to schedule the date of October 12th for our second FRA hydro. I went up to the museum the week before and I was joined by Channing Walker, Steve Lee, Charlie Spike, Hank

Stiles, Erik Olson and David Elems. I worked on finishing repairs to the FRA noted items as well as getting the running gear back on the engine. David Wallace brought us the reverse quadrant that he restored. Channing Walker worked along with Erik Olson and the wood cab roof was installed using lumber that the museum had acquired years ago when the high school got a new gym floor giving the old wood to WPRM. The cab roof had to be installed so the electrical system can be put back on the engine. We also brought a pallet of brick in from our storage car and bricked the firebox. We filled the engine and warmed it up for a hydro that we performed on the 9th we had a couple of leaks so we dropped pressure made repairs and did a second hydro which had no leaks. Satisfied with the results we kept the engine warm over the weekend so it would be ready for the FRA on Tuesday. I got a call from the FRA on the 11th that they would not be able to come to the museum due to a snow storm and their vehicles not being equipped for mountain snow conditions. We would try again for Wednesday or Thursday. On Wednesday the 13th, the Union Pacific put a train on the ground in Oakland and all plans for the week were annulled and we would have to reschedule with the FRA.

The FRA and the WPRM agreed on a hydro test on the 11th of November. I headed back up to the Museum on the 6th to start prepping the engine and work on the water delivery system. David Elems machined new thread unions for the fireman's injector, and a new washout plug for the back head. The steam crew of Erik Olson, Channing Walker, Hank Stiles, Steve Lee and Charlie Spikes worked on fitting the piping and injector on the fireman's side. We finished putting the mortar in the firebox and smokebox and sealing the branch pipes and smokebox door. We also made new reach rods for all of the valves in the cab and made sure that every valve now had a handle. We were ready for the FRA and our final hydro test to be done for them. I contacted the FRA to confirm that inspectors would be in attendance on the 11th. I was informed that the FRA would not be able to come to the museum and we were instructed to

continue on with our work and steam test on November 12th.

The grand weekend finally arrived. On the 11th we filled the engine and warmed up the boiler on propane. The tender tank was inspected and washed out then filled for the 1st time. The engine was put back into the shop for the night. On Friday the 12th, after we had a safety meeting and some instructions for the steam crew, we lit off the engine around 10 am for the 1st time since the fire was dropped in the mid 1950's. The engine was doing fine. We had some steam leaks as pressure came up on our safety valves at the threads. We decided to deal with them the following day before we fired the engine back up. The decision was made when the boiler was at 50 PSI steam to switch from air supplied by a compressor controlling the fire in the boiler, to the boiler's own steam to control the firing process in the boiler and shut down the compressor. We use air pressure in place of steam pressure to operate the locomotive until steam is of a sufficient pressure to handle the process. When we opened the turret valve and manifold valve, we got a slug of water through our piping to the atomizer. We had been having problems throughout the day with the firing valve plugging on some of the old bunker oil that was still in some of the piping, but by

afternoon things had warmed up and the oil was flowing just fine. When the slug of water went through the piping any old rust and scale that was in the pipe was flushed out of the piping. Unfortunately, it wound up plugging the atomizer. This caused us to have a hard time keeping the smoke to a minimum and at 135 lbs. of steam pressure we decided to drop the fire for the day.

On the 12th of November, after removing the burner and cleaning the sludge that was plugging the atomizer and replacing the atomizer steam valve for a different type of valve, we fired the engine back up around noon. The WP 165 was fired for the most part by Erik Olson and Channing Walker with others observing and learning from the more experienced crew members. The engine fired very nicely and the switch from air to steam went well. We were able to raise the pressure to 180 lbs. which is our maximum authorized working pressure, we were able to set the safety valves and test the air pump. When we went to start testing our injectors, we found that our boiler checks were leaking back and our injectors would not prime due to overheating. With our water glass now down to about a quarter of a glass we dropped the fire and put the engine back into the shop pending repairs to



the check valves.

Although we would have liked to run the engine, it just did not work out for this steam test. With the weather turning colder, we did not want to attempt it again this year. We have to dry the engine out for the winter since it gets very cold in Portola. On Sunday the 15th, David Elems, Hank Stiles and I pressurized the boiler on air and blew all of the moisture out of the piping and cylinders. We drained the boiler and tender on Monday, we then dropped the boiler plugs and did a boiler wash. We put the engine away for the winter. David Elems and I did some minor inspection work on Tuesday of the boiler checks and injectors. I made a list of materials we will need to repair a few items and left for home on Wednesday.

We are all looking forward to the 2022 season with the WP 165 doing the honors on the caboose trains. Till next season, thanks for the support.



Museum Sponsors

The Western Pacific played a major role in developing the economy of Plumas County and the surrounding region. The Western Pacific Railroad Museum is proud to be a part of that heritage and to hold a position in supporting the ongoing economic health of our community. We welcome the support of that community in return. Helping to preserve the Western Pacific is good for tourism, good for our regional culture and good for business.

We ask our members and visitors to support our business sponsors, companies who have generously contributed to the museum and its mission to preserve the Western Pacific family. If you are a business owner, see how you can support the WP Museum, your community and improve your advertising and networking outreach through our sponsorship program. See www.wplives.org/sponsors_how_to_become.html to learn how.



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