



*Preserving "THE FEATHER RIVER ROUTE"*

Issue - 193

April/May/June 2022

## WP 165 Steams Again!



*WP 165 pulls freight consist for special post-convention events at the museum on Sunday, May 15<sup>th</sup>, 2022.  
- Photo by Michael Clawson*

### Western Pacific 165 Inaugural Runs for the Public

*- Roger Stable  
CMO Steam*

May 15<sup>th</sup> was a grand day at the WPRM. The WP 165 was fired up and operated for the public and attendees of the WP convention in Reno. The steam crew was busy early in the week getting the engine put back together from our test runs in April.

One of the issues discovered during our April runs was that the pump used to put fuel oil in the tender was not working. Charlie Spikes took a look at the pump but was not able to fix it. I took the pump home with me and, after I took it completely apart, found that one of the diaphragms was not connected to the cross shaft. Once I put it back together and made a couple of new parts for the air valve, it worked just fine.

*( continued on page 6... )*

(...Western Pacific 165 Inaugural Runs for the Public, continued from page 1 )

After the April runs, it was determined that the cross-compound air pump was working and did pass an orifice test, but that the shafts were pitted and causing the steam packing to degrade very quickly. Hank Stiles and I stayed an extra day at the museum and took the pump apart so that the shafts could be repaired. Back in 2014 we had taken a look at the pump, lubed it up, lapped in the check valves and ran the pump on shop air, but really never went any farther into the pump. Hank and I found, upon removal of the bottom head, a mess of dirt and old carbon. We were amazed that the pump was able to work as well as it did. I returned to the museum the week of May 2<sup>nd</sup> to continue working on the pump. I removed the pistons and shafts and proceeded to weld up the shafts with a special welding rod made for the purposes of building up worn areas without distorting the original



*WP165 welded pump shaft before cleaning up on the lathe.*

*- Photo by Roger Stabler*



*Repair WP165 pump shaft ready to reinstall.*

*- Photo by Roger Stabler*

metal. I then put the shafts in the lathe and machined them back to original size. Once this was done, we cleaned out the pump air passages and I again lapped in the check valves and put the pump back together. We again ran the pump on shop air just to make sure everything was working. I then left the museum with the intent to come back up the week of the May 8<sup>th</sup> to get the engine ready for it's run on the 15<sup>th</sup>.

I arrived at the Museum on May 7<sup>th</sup>, so that I would be able to get started on May 8<sup>th</sup>. I went to work on getting the cab windows that Erin Swain had made for the 165 installed. I had to manufacture the window tracks from scratch. I found a piece of the old window track in our storage box car. We proceeded to make a new window track to match what we had found in the boxcar. After we had the tracks for the engineer's side installed, we began to realize that what we had put together would not work. The 165 has three windows on each side, one is stationary and two slide past each other, but all three require a separate window track. Our original track only was made for the two sliders. David Elems, Hank Stiles and I went back to work modifying the engineer's window track into having an extra slot for the windows. We had to do this without removing the upper track from the engine which proved to be no easy task. The fireman's side was much easier since we had learned from the engineer's side what not to do.



*WP165 New cab windows*

*- Photo by Roger Stabler*

I had to fabricate some additional steel spacers since my original steel estimate was for only two tracks. We had all of the side windows fitted and installed in the cab by two p.m. on Tuesday.

On Wednesday I worked on fabricating the whistle lever for the cab. Hank Stiles joined me and started working on some of the piping in the cab and took on the task of removing all the paint that was on the engine rods on the fireman's side. We had planned on moving the engine out on Wednesday to wash it down so we could paint the lower end on Thursday, but the weather did not cooperate so we worked inside on the engine to continue prepping it for Saturday's fire up. David Elems worked on the wiring of the cab and lighting system.

On Thursday, the 12<sup>th</sup> of May, Channing Walker, Steve Lee, Mike Waters and my right-hand man, Charlie Spikes, joined the crew. Charlie does not do a lot of the physical work on the engine anymore, but I would be lost if I did not have Charlie's help in getting supplies to help keep the project moving and he is always ready to assist in any capacity to help the crew. Channing went to work fabricating brackets for David on the cab lighting. Mike and Hank worked on getting the tank car, with our fuel in it, rigged up so we could fill the tender. We were able to get the engine out of the shop in the late afternoon and give it a good bath. I don't think it had been

washed since it was painted. We then put the tank car in the shop behind the engine and called it a day.

Friday started out as the best day, weather-wise, of the week. Hank and Mike filled the tender with fuel from our tank car. Steve Lee procured the paint and applied the white stripe on the running boards and tender. David Elems continued work on the electrical. Kirk Baer came in around two p.m. and put the graphite on the firebox sheets. When Kirk Baer finished, I had everyone except Mike Waters and me leave the shop and Mike and I painted the lower end of the engine. We finished about 6:30 p.m. and called it a day.



*Fresh black paint on lower end of engine.*

*- Photo by Roger Stabler*

Saturday started with breakfast at the local café. I wanted to have a safety meeting and briefing with the crew on what our procedure would be for the day. We all went back to the museum. The WP 1503 was started and used to switch the WP 165 to the pad we use to fire the engine up on. We lit the fire off about one p.m. It takes about two and a half hours from the time we light the fire until we start to produce steam. Once we got to about 100 lbs. of steam, we made the switch from the air compressor we were using to operate the firing controls to steam and the engine was then on its own. While we were firing up the engine, our steam crew was busy

lubricating and servicing the engine so that it would be ready in the morning. We made full pressure around five p.m., and with the help of Channing Walker and Don Nelson at the firing controls, we were able to get the pops set. We took the engine out for a couple of runs to shake it down. We switched out the train we were going to pull on Sunday and then put the engine to bed for the night.

Sunday, the big day, the steam crew was up at five a.m. with a start time of six a.m. to get things ready. We started the fire shortly after six a.m. I then went to the lounge car to fix breakfast for the crew and as each person had breakfast, they would relieve someone else to come in to eat. The steam crew stayed busy getting the engine up to pressure and finish prepping for the day's runs. Hank Stiles was the fireman and I was the engineer for the first couple of runs. At around ten a.m. we coupled onto our train of about eight hundred tons. After pumping up the air and doing an air test, we made our first run for the public around the balloon track. Much to my disappointment, the whistle would not hardly make any sound when I pulled the handle in the cab. The other thing that came to light, after running Saturday with no problems, was that the left-hand cylinder cocks had managed to get some crud stuck in them and would not close. After the first two runs, we backed the engine back around to the pad and Channing worked on the whistle linkage which helped but it still would not give us the volume that it should.

My highlight of the day was to have Norman Holmes in the cab of the WP 165. It took four of us to get Norman into the cab, but once Norm started running, it was like watching a seasoned veteran at the controls of the engine. My other highlight was having everyone who has been involved with this project, no matter how minor a role, take a turn at the throttle to experience the thrill of running a steam engine. We ran



*FRRS Founder Norm Holmes ready to run WP 165 on Sunday May 15, 2022.*

*- Photo by Kerry Cochran*

the engine until about five p.m. with a group of sound engineers who recorded the WP 165. We ran the engine hard on Sunday with a good amount of tonnage and we had several things shake loose, pipes leaking at joints that will have to be dealt with. We installed a globe valve under the whistle so that it could be shut off while firing up or cooling down the engine, since it is a pressure seated valve and has no spring. We found that the globe valve was interfering with the whistle and not allowing the valve to open. We will have it corrected and the whistle should really scream when we fire up the engine for the caboose trains on July 2<sup>nd</sup> and 3<sup>rd</sup>. It should be noted that even though a lot of people at the museum are not in the quote steam crew we have been assisted by the operating crew of Ethan Doty, Steve Habeck, and Greg Elems with positioning moves and support at the museum. I stayed an extra two days and left on Wednesday after fixing a couple of the problems we found on Sunday and draining the boiler, which can't be done until it cools down. Until next time, everyone have a safe and great summer.