

Willamette # 7 Work Party Notes Historic Museum Fort Missoula, Missoula, MT 9/14 & 28 10/12/19 - # 8, 9, 10

Work over the next 3 Work Parties turned towards the trucks, and starting to protect the locomotive form the "ravages" of the upcoming winter months. On the lineshaft side "R", we opened and cleaned all of the remaining oil galleries on trucks # 2 and # 3. The # 1 truck had been previously completed. Found them to be completely packed with sand and "Mud Dabber Nests". Once that was completed, we removed the brass from axel # 1R and cleaned the axel and journal box. On the right-hand side, the truck can be jacked using a 20 Ton jack under the binder bar, and it can be lifted high enough to remove the weigh hence the free the brass from the axel. The brass has a 5/8"-11 threaded hole on the right facing the brass. A puller was made to allow for easy removal of the brass.

It should be noted that the May 20, 1962 edition of the Great Falls Tribune states that ACM removed the brasses from # 7 and installed them in "Shay" # 5 for Jack Hoover when he purchased that locomotive. We have to date found no evidence of this. As an editorial comment, I am not sure that the brasses are even interchangeable between locomotives.



Jacking and removal of Brass # 2R note jack

Crew cleaning oil galleries trucks # 2, # 3

We then moved to the right side of the locomotive. This side has been mostly in the shade so we are expecting the most issues here. Starting with truck # 1 we found that there is an Equalizer Beam on the right side of the trucks. This required not only jacking the truck "frame" but jacking the equalizer off of the what Willamette refers to as the "Inside Box" which is in reality a journal box. This required placement of

what Willamette refers to as the "Inside Box" which in reality is a journal box. This required a placement of an additional 20-ton jack inside the frame to jack the beam. We did one axel at a time. Also found that axel # 1L show the most ware, due to being the lead axel and "attacking the curves" along with being the most exposed to the elements.



Jacking # 1L "Safety Cribbing" under truck

Jack lifting equalizer beam

The Truck on the left side journal consists of Inside Box (discussed above), journal brass (bearing), inside box cap, which has a thrust plate (brass) bolted to it with ½-13 bolts and the pedestal cap. We found both of the thrust plated at one broken or missing bolt (2 total bolts per plate). The holes for these bolts are threaded in the brass thrust plate and were "chased" with a tap and found to be in good condition. The missing bolts were replaced with like kind. The pedestal caps (cover plates) had a number of shims, this is to set the "back lash" of the gears on the right side. Careful note was made of the number of these shims and they were installed as found.



Axel # 2L after removal of pedestal cap



Axel # 2L cleaned pedestals need cleaning



Outside Plate (pedestal cap) cleaned for installation Inside plate with thrust plate bolted together

After completing truck # 1 we moved on to truck # 3 and completed the process on the left side. Truck # 2 is located under the access stairs, and will prose some access issues and tight working space so elected to complete it last. It should be noted that all the old wood waste was removed and disposed of and everything reassembled with a light coating of grease. We will repack the wool waste at a later date prior to moving the locomotive. We found that axel # 5L has the worst brass to date, and will need the Babbitt replaced. The # 5L axel did not show any signs of damage and this axel was cleaned prior to the reassembly and installation of the brass, which was scraped and cleaned prior to refitting in the box. This journal contained an abnormal amount of sand from earlier sand blasting, as discussed in previous work reports. We also noted that # 6L also had more sand than has been discovered before, but just around the box and in the packing. It did not affect the brass or axel.

Additional work was completed to "winterize" the locomotive. Plywood Boxes were constructed to cover the right-side journals and installed on the # 1 truck. A tarp was secured over the cylinders and works to protect it. Everything was well oiled. We expect that we will have limited working days left prior to winter so are trying to get a lot accomplished.



Working on axel # 6L

5L Brass after removal note puller tool



Plywood cover (weather protection) # 1R

Inside Box (Journal Box) ready to be cleaned