

Willamette # 7 Work Party Notes 5/11/19

This is the first "real" work party at the locomotive. We opened the Smoke Box front and entered the Smoke Box and clean out all the debris. Initial inspection found all parts (Blast Nozzle, Blower Pipe and Petticoat Pipe) intact and serviceable. Found some metal debris that had fallen from the inside of the Radley Hunter Stack. The Front Tube Sheet along with all tubes were in place. The lower knuckle appears to be serviceable pending additional inspection and ultrasound. Noted that no door gasket was in place, and that "bird" were living in the stack.



Cleaning Smoke Box

Petticoat Pipe and Tube Sheet

With the thought of rolling the locomotive to facilitate track repairs the crew turned attention to the running gear starting on the Engineer's side of the lead truck. It was noted that all of the oil passages were full of sand from earlier sandblasting operation along with nests from mud dabbers. We first removed the journal box cover plate and then the Line Shaft outside brass bearing half. It was noted that there was some pitting and water damage to the front bearing surface on the line shaft. We then removed the cover and bearing from Axel # 2, this end of the Line Shaft only had a "light" coating of rust which was easily removable. The front of Line Shaft # 1 is repairable. The drive line between the Front Truck and the "Engine" was also removed. It was noted that one of the "Horns" on the rear (engine end) of this driveline was broken and appeared to have been repaired in the past (poorly). This is repairable. The horn bearings are of steel after cleaning and polishing can be made serviceable again. All of the bearings and driveline parts were placed on a pallet and moved into the Saw Dust burner for safe storage. The two drivelines and Front-Line Shaft were placed on blocks next to the locomotive with bearing services greased for protection.



Sand and Debris in Oil Passage

Front Line Shaft with Bearing Removed



Rear of Driveline Showing Broken Horn

Crew Removing Line Shaft

Next, we turned our attention to the Engine its self. For the purpose of this reporting we will be calling the 3 cylinders, related valve gear, crank shaft, rods, etc. the engine. We found that most of the oil and greasing points still had covers in place. The ones that were missing were filled with sand from previous operations. We started the process of removing these lubrication points, removing said pins and bearings and cleaning all including washing out passages intended for oil or grease. We found that all points opened was slightly stained but so far, no damage to bearing surfaces. We tried to rotate the "Engine" over by placing a 10-ton jack under a crank shaft throw, but would not roll over yet.

We removed the top cover metal plate which had been welded previously over the engine. This plate as built should have been hinged to fold up out of the way for servicing. The original hinges were on the plate but had been cut at a previous time. We found plugs into the top of the cylinders (1/2 NPT) which were removed and lubricating oil was sprayed into each cylinder. We will let that soak for a time. Grease plugs were removed from the crankshaft rod ends and the old grease removed. New grease was installed, the bearings took lubrication freely.



Line and Driveshafts off locomotive

Crew inspecting and planning next move



Tumbling Shaft Pin prior to cleaning

Oiling Points Removed and Cleaned