

**1). REMOVING THE RIGHT SIDE SLIDE BARS – 01 MARCH 2014:**



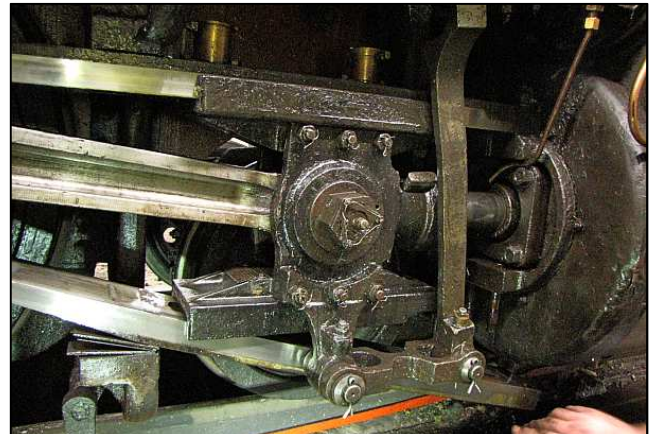
P01 - Susie had been knocking for a while on the right side, even though the bars were reset last knock. Apart from the shock to the knockion and slippers, the bar ends were knock closer than the worn-out centers and the bars thus knock-knock-impossible to set up properly knock parallel.



P02 - The center of the lower bar had a clearance of over 4.5mm to the crosshead slipper, when it should be 1mm from end-to-end. The connecting rod was jacked-up to take the weight off the crosshead. Without looking at the rest of the report, can you spot the mistake that had been made?



P03 - The lower bar is easy to undo, being held onto the rear motion bracket with a nut running on a captive hex head bolt. (You can see the still oil-filled recess where the bolt head slots in.) The front end is held on by nuts that run on a pair of studs on a ledge under the cylinder gland.



P04 - When uncoupled, the slide bar tips down and forward under its own weight. You can see the stack of shims fanning out on the rear motion bracket. These shims were fitted by Noddy n' Smudge back on 14 April 2013, but even then they knew it that was just a very temporary fix.

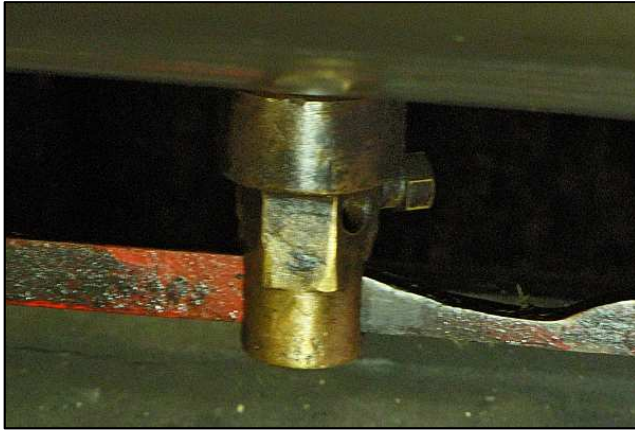


P05 - Here is a spare axle sock-box being used to keep the loose bits and shims together. We need thicker shims, as we will now have to raise the lower bar by about 4.5mm after it has been skimmed. Naturally, we will keep these shims for later use.



P06 - Although the newly-unbolted slide bar tilted OK away from the crosshead, it was obstructed by the rear cylinder cock. Captain Curley and The Smudge are stubbornly trying to wriggle that bar out past the cock's body but to no avail. (If the crosshead was worn, this might have worked.)





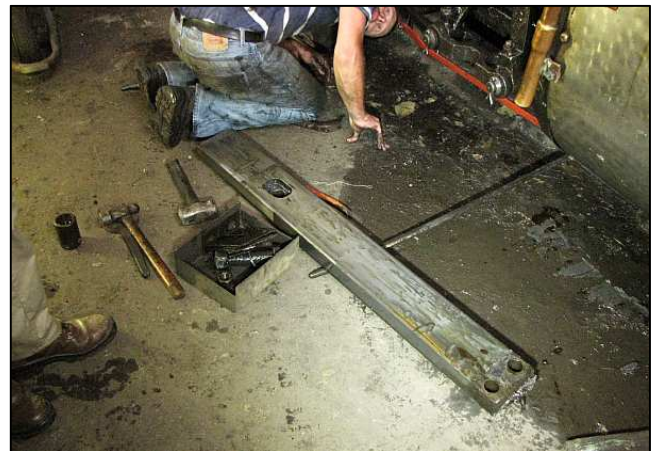
P07 - The cylinder cock that caused the initial hang up. A part of the reluctance for removal was avoiding having even more loose parts lying around, and also (mainly ☺ ) avoiding a long walk to the tool store in the 15M yard!



P08 - Even with the rear cylinder cock removed, the bar was still snagged-up. The problem was that the crosshead wasn't forward enough – although going too far forward would get the horizontal union link mixed up into the works.



P09 - With the crosshead unsupported, it would not be a good idea to move the locomotive to shift the pistons, due to potential damage to the glanding hardware and the garter rings. Unfortunately, the shunters didn't think about putting the connecting rod in the lower quadrant, so it later got badly in the way to remove the upper bar.



P10 - Success is defined as getting the stupid slide bar out without squashing toes or finger tips and without damage. Due to the density of the hardened steel, that bar is a LOT heavier than it looks. It is going to be cut flat with a shaper and then milled to the final finish. One of James's contacts will be doing the work for about R2000 – the bars are a bit too big for our mills to handle.



P11 - The upper bolts at the back end are easy-peasy to reach – with the fingers. But there isn't enough room to swing a dead depot rat behind the motion bracket – we lost time trying to find short cheaters to match the wrench.

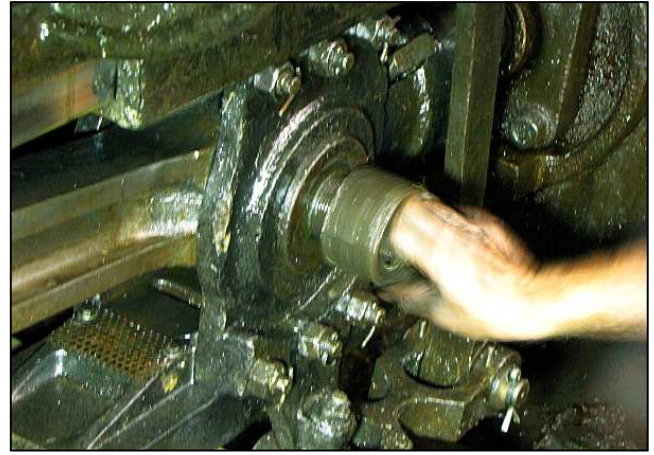


P12 - The two oil cellars were removed once the back bolts were loosened. You don't often see this underside view of a direct discharge oil cellar. (i.e. : Without a drip feed pipe.) These were carefully locked away, as all our brass stuff is.





P13 - Here, you can see the error. The connecting rod is in the upper front quadrant and obstructs the slide bar from moving rearwards. Sigh. The fellows had to block up the cross head to prepare to remove the wrist pin. (Small end.)



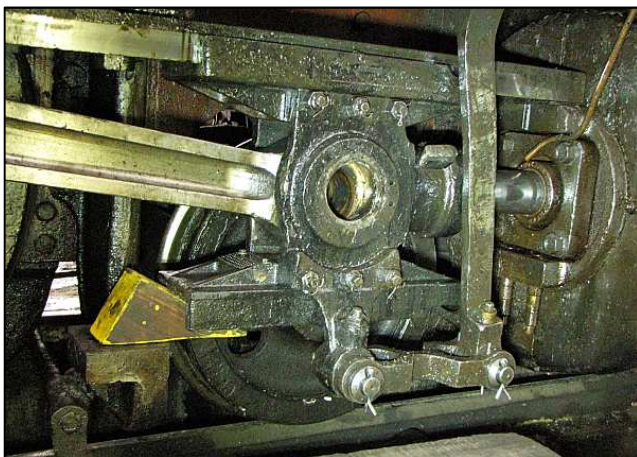
P14 - After removing the safing wires and the castellated lock washer, and then a bit o' sloggin' to spring the threads, the wrist pin nut just spins away on the juicily oiled threads. Evidence that Reefsteamers actually OILS their engines.



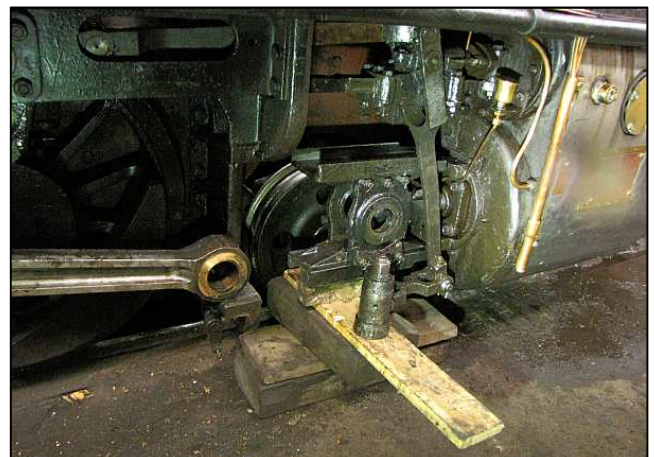
P15 - The gudgeon, or wrist pin, came out easily from the small end's bronze bushing, but then it tilted and started to jam between the crosshead and the bogie wheel. Fortunately, the last few drifting whacks weren't at full capacity (More like steady nudging) so we didn't have a totally wedged pin in there.



P16 - It was hoped to be able to push the piston (and crosshead) forward to disengage the small end and let it drop. This would tilt the connecting rod down out of the way of the slide bar. But, without the wrist pin in place, the connecting rod was tilting slightly outwards under its own weight and the small end of the forging engaged by friction.



P17 - Then we reluctantly nudged the 12AR back after all, using 'Andrew' the Hunslet shunter to shift the obstructing connecting rod back and to disengage it from the crosshead. But even with the pin out, they STILL wouldn't part and the piston moved backwards instead. Grrr! A certain photographer (Ahem!) suggested that we wedge the back end – and the idea worked with a scotch block.



P18 - Here's the end result – the connecting rod's small end was successfully disengaged from the crosshead and resting on the rear motion bracket. The piston was pushed forward with a crowbar once a gap appeared in the crosshead bore – thus we managed to avoid moving the now-unsupported piston rod too much. (The point of this extra exercise.)



2). MACHINED SLIDE BARS – 2014-M03-15:



P19 - Two weeks later, the slide bars arrived at the depot after being machined and then milled flat. As per their departure, they arrived packed 'side-saddle' on the Hunslet, carefully padded as not to mar the new surfaces.



P20 - A closer view of the newly machined and freshly oiled crosshead slide bars – this is the plain-topped lower bar.



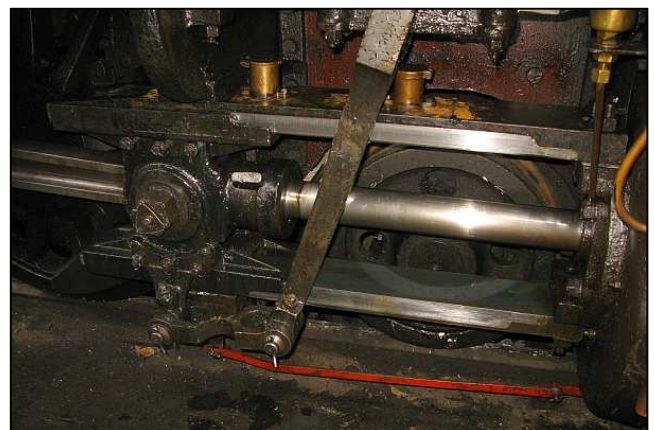
P21 - This was a day of various meetings, so there wasn't much we could do with the key guys being taken up with talking. Finished with taking notes for the day, Club Secretary Stewart Currie keeps himself busy by scraping the crud and oil off from the waiting shims.



P22 - Here is a pile of the shims that were removed. Today's project would be to pack the slide bars away safely and to measure up for a new shim for the lower bar. The new shim would have to be between 4-4.5mm to allow for that amount of material that was taken away.



P23 - An already SMUDGED upper crosshead slide bar prior to being fitted on Fri, 21 March (Human Rights Day). You can just see the two oil holes into which the oil cellars feed. (Pic P12) This bar 'only' needed 1mm machined off.



P24 - The newly installed slide bars on Sat, 22 March. They would be used the following week, and with the fitter driving the train as well. Note the reflection of the bogie wheel rim on the lower bar.

