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“Old Rube restoration part 14”

This document was written by Paul Naylor in winter 2025/26 and is the eighth article in a restoration project. The articles were published more or less simultaneously in the Frimley and Ascot Locomotive Society newsletter.

The tyre has now cured, and I can machine it to match the other wheels. When I drew the tyre I wanted, I specified an outside diameter that was very close to the others to minimise the trimming required, but the wheel flange I specified was deliberately too large, so this is where most of the attention will be.

Machining it was straight forward and similar to the other wheels. The tyre had fitted flush with the wheel back and did not need skimming, which is just as well as getting a lathe tool to the back of the wheel in the setup I had was not going to be easy. I used carbide tipped tools for the work on the other wheels (and preparing this one for the tyre), as they were cast iron, but changed to an HSS one for the steel tyre. I did have to turn the flange diameter down and reduce the thickness of the flange so that the wheel gauge I had made would fit OK like the other wheels (taking care to make a root radius to avoid cracking and make a gentler transition between tread and flange). The tread was very close and only needed a light skim as well as adding a chamfer on the outer edge. The Loctite did not budge so that is good of course. Interestingly, the wheel, when glued and pinned to the axle was very slightly out of true: not enough to worry about, only a few thou, but because I machined the tyre mating surface on the wheel after refitting it, the tyre now runs true. I hope the ‘right old mixture’ of Loctite 603, roughening up the mating surfaces of axle, wheel axle housing, and ditto for the tyre plus of course the taper pin replacement and grub screw locator is now adequate for the purpose. A coat of paint makes the wheelset finished and ready for action, or at least re-assembly. The photo shows this wheelset, newly tyred wheel nearest the camera. Here endeth the loco wheel renovation (subject to a satisfactory check on them all with club’s wheel gauge)!



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I have continued work on painting the chassis, comprising several painting and scraping sessions with the chassis in a variety of positions, some vertical and others horizontal. Eventually, I have painted it all with the requisite two coats of Combicolour paint, and with the appropriate hardening time. This is a straightforward job and no need to bore you with the details, here are a few photos of the progress! I have masked off the fittings that are not to be painted to avoid splatter: most of these are red at



the moment, and I may touch them up afterwards, especially the reversing lever on the main valve gear link lifting rod as this is outside the frames and large (ie



prominent). I did scrape the paint off with a view to leaving it finished steel in colour, but it is not made particularly with this in mind and painting is easier and more prototypical/original. I do need to order some good pigment red paint.

The curved bogie bolster 'bearing surface' is just in contact with the underside of the large frame spacer visible forward of the smokebox saddle, and the spacer has a worn groove in it with a corresponding flat on the bogie bolster that you can see in the photo thanks to the weight pressing on this sliding joint. Although I have painted it, I should really improve the mechanism a little. I could bolt a thin piece of hard-wearing metal over the wear on the frame, but this would be very sacrificial and not help with the freedom of movement of the bogie (stiffness here probably assists the loco round corners, but it is not very controllable). The solution I opted for is very simple: just bolt a suitable bearing onto the bogie bolster for that to bear on the frame instead of the bolster. This obviously eliminates most friction, leaving the side control as the main force to assist on curves. I had a suitable bearing in stock and a few minutes with a drill and then turning a spacer for the bearing (it has a 12mm hole and I am using a 10mm bolt) saw that completed. If it doesn't work, it is easy to remove and return the loco to as it was before apart from a 10mm hole in the bolster. The bearing sits around 1mm higher than the bolster and this takes up the wear.



I am now starting to think about rebuilding the chassis, at least to remove the piles of bits I have cluttering up the place, and to reduce the potential for mixing things up or forgetting what went where. A final look at the chassis as painted though has made me rethink the red painted bits of the valve gear that have remained in place, since the old paint on them is more or less falling off and lets the show down a bit. Unfortunately, I could not see how to remove any of this without fairly problematic disassembly as most of it seems to be held together with pressed in or pinned components, and I cannot get the links off without removing some of these. I scraped off the old red paint on most of the link work anyway ready for a repaint (more Combicolour, red this time) that will need applying carefully to avoid decorating the black chassis. Although there is some wear apparent on the pins and die/link combinations: this does not seem excessive though and seems to present relatively little slop in the valve position, so I feel that the painful task of removing (and replacing, maybe, with new pins) the valve gear simply to repaint it more easily is not really justified.

I took the wheel sets plus the bogie to my club to check against the 'official' wheel gauge. They were all OK and within requirements. One experienced chap recommended that I round over the edges of the flanges more (I had left them quite square with 'knocked off' corners), so when I got home, I did this using the same set up as before, chamfering them with a tool and then rounding with a file.



Since the loco had red rings painted onto each wheel hub, I thought it would be a good time to paint these on too since I could rotate the wheels in the lathe (by hand) and apply paint with a rigger brush. The wheel I used for the photo had two locking grub screws in it (for hopefully historic reasons), hence the two holes in the axle joint!

