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## “Old Rube restoration part 19”

This document was written by Paul Naylor in spring 2026 and is the eighteenth article in a restoration project. The articles were published more or less simultaneously in the Frimley and Ascot Locomotive Society newsletter.

Thinking about the prospects for re-inversion of the chassis, I thought I had better make sure that the drain cocks fitted OK and the plumbing was serviceable since accessing this when he right way up would be difficult. The drain cocks themselves are OK (now) and they screw into the cylinders without fuss. I made some PTFE washers to fit in the hole before the cocks were screwed in so they could tighten up to something resistant, without this they would have been either free to rotate or not lined up neatly. Then I thought I would see if the pipework I had would be usable. Yes well, it shows many signs of bending and re-straightening, and the pipes were kinked here and there. I decided to remake this, and try to get it slightly higher in the chassis to protect it more. I retrieved the pipe cones and fittings from the drain cock ends to use again, and similarly used half of the central manifold so I did not have to remake any union nuts. The photo right shows the cannibalised old pipework and the new one below.

I then thought I might as well fix it in place: if it is in the way when turning the chassis, I can easily remove it. The pipe from the central manifold is amongst the pipework I have and I have no idea which: I may



remake it from this union to another more accessible on the top of the chassis anyway for future ease of maintenance. That completes the work on the chassis prior to turning it over, which is a job that will have to wait for family muscle to come and help. In the meantime, I have been reviewing activities on the tender...

As a reminder, this is a large rectangular steel fabrication welded up with the chassis rails and the bits and pieces (like bogies etc) bolt to it. I was using it as a wagon to hold bits, but I have now removed these to get over the 'what have I got to do now' demotivation (!). Most of the work will have to be with it upside down (on the floor more than likely) and I shall ready it so my visiting muscle can help with this too. Hopefully it will not be too heavy for me to shift



once the bogies and some other bits are removed. It does not have a tender handbrake so that's one less complexity. The main initial



activity is to remove the two access hatches on the top to investigate the internals. It is painted but otherwise untreated steel, so I am hoping that I do not have let new steel into it anywhere owing to rust. These hatches (that I may replace with trays to hold things like a compressor, battery etc) are secured with a million bolts it appears (why?): I am hoping that the spilled steam oil all over the top has kept them rust free, which would be one

advantage of the mess. The drivers end has a footwell that had a 12 volt tyre pump and battery in it, and from recollection, the driver sat astride using external footrests. A necessity because the footwell is too short for my booted feet (just), and the boiler comes nearly to the engine rear buffer beam so little space there. I want to be able to drive it with feet inboard though as an option (or for other smaller drivers) so maybe I fit a false floor with a hinged flap to the engine buffer beam and extend the engine/tender link a couple of inches. That is a thought for the future when it is all upright and finished. I may have to cut the curved sides back a little to aid this, and alter the transverse bulkhead you can see to allow a longer seat for the driver to sit further back. You can see that there is no provision, internal to the tank at least, for a hand pump, so the engine relied for water feed on two injectors only - adequate for boiler test purposes, but, ideally, I would like another method of getting water into the boiler on the move (see earlier chat about a crosshead pump).

Well, I had a go at removing the bolts around the hatches after spraying WD40 around and leaving it for a day. After trying different spanners, I eventually discovered they were 2BA hex head bolts ... and they were seized in. The first couple I tried (in the forward hatch where they did not look as rusty) sheared off in spite of taking care to avoid this. Then I heated a few of them up to nearly red heat and tried again. One came out OK, revealing it was an inch long, the next



stripped the threads but came out in the end, the next came a couple of turns out then sheared off. Obviously then bolts might well move but the long portion of thread inside the tank is rusty and stops many of them coming out. The other snag is the amount of oil around the tank top providing an extra hazard using heat! At least a probe through one of the holes shows that there are no stiffening beams around the hatch edge for longer threads than the 2 or 3mm the tank is made of.

What to do next? It is going to be essential to get these hatches off to see inside let alone any improvements. My current thought is that since I am going to modify them anyway, I could just use an angle grinder cutting disc to cut them out round the hatch edges (taking out the bolts, hatches and tank surround with the defunct holes in). I don't want to do this in the workshop and spray metal and disc dusk everywhere, so that will have to wait until it is stripped more and more easily moveable. I always used to say that my definition of an acceptable work space is where you could angle grind a water tank and not annoy the neighbours... about to be put to the test. Memo for later: refit hatches with fewer screws (if not some sort of quick release catch) and use stainless steel fixings.

I was getting a little impatient waiting for family muscle to visit (he is moving house, so I suppose it is understandable!) and so I decided to tackle it myself. The chassis needs to be inverted and turned, as it is the wrong way round as well as upside-down. I attached two slings to front and rear, lifted it off the stand and lowered it onto blocks on the floor. I then removed the front sling and lifted the rear end upwards until it was vertical, by then the front buffer beam was resting on many towels on the floor. The bit the wife did not like came next: holding the chassis vertical while I removed the rear strap as well and replaced it on the other side. This meant that I could tip the chassis past balancing point and let it down to the floor again, this time the right way up AND right was round. Reattaching both straps allowed me to lift it again, this time to put it back on the rails. In the end, easy and used more adrenaline than physical effort. This is where I no doubt remember what I had forgotten to do while it was upside-down... but at least it is on all 'fours' and I can carry on with topside work.

