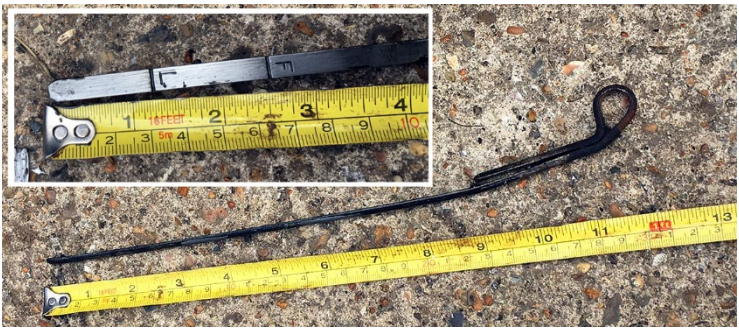
BEV WR5 Baby Jane restoration / recommissioning - Andy Kemplen – Latest Report

I left off at the end of the previous article mentioning that the provision has been made for the incorporation of a relay operated interlock that stops powered movement when plugged in to charge, well I ended up with egg on my face with that one! I don't know why but I had just assumed that when the charger was plugged in a small current was given to the relay breaking the control circuit preventing the movement of the locomotive, but no, it is the other way around, battery current is always there until its plugged in, thus breaking the control circuit and since we have a battery disconnect / emergency switch which does the same job, we don't actually need the fancy safety feature, ahh well it was only a couple of hours of head scratching trying to make it work. The relay and its associated wires were removed, the same day they were fitted.

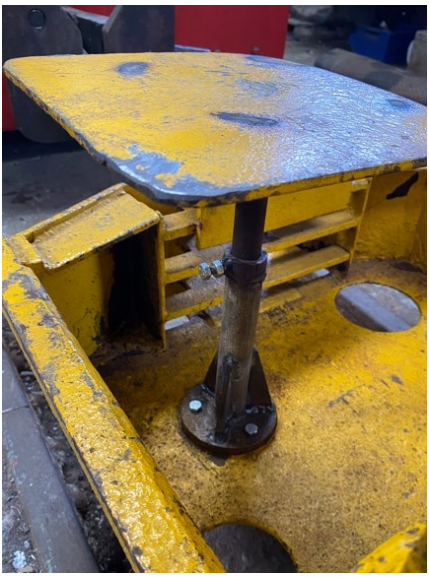
Mention was also made in the previous article of the final drive gearbox dipstick, other railways with WR5 locos that I reached out to all came back to us with assistance (where they had a dipstick, as some found they are in the same boat us with it missing!) those that had one were able to remove their dipsticks and photographing them beside a tape measure so I could see how it should be, as seen below.

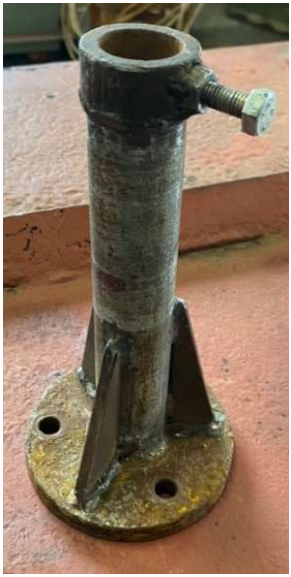


Using all the photos from both Richard Faust Fellows at the Great Bush Railway and Ben Coulsen at the Lea Bailey Light

Railway I have been able to create an engineering drawing that will let us manufacture a dipstick when some suitable material or an existing old car dipstick that can be cannibalised and adjusted to the correct dimensions, is found, do you have one we could possibly use? it would need to be just over a foot long.

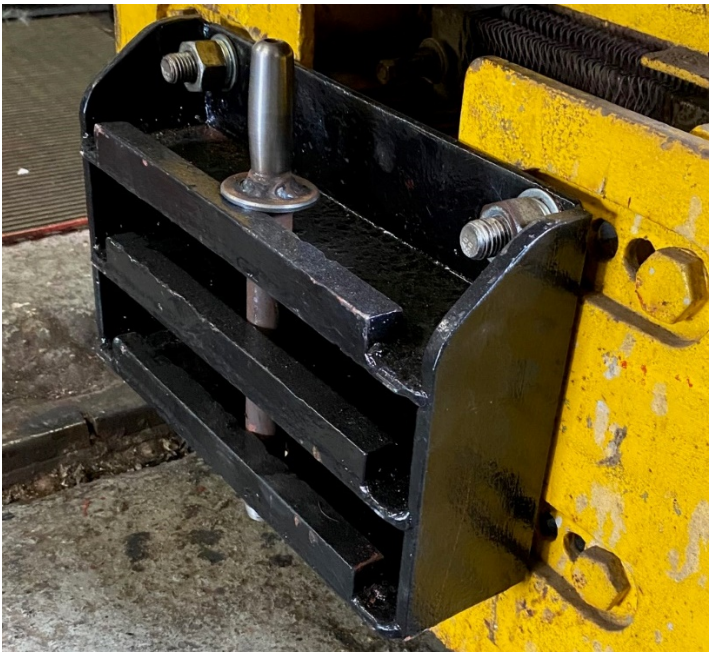
When Baby Jane was first tested the need to fix and fit the seat was also discussed as holding on and operating the controls was not easy when stood on the footplate. The repair of the original seat was completed as seen below.





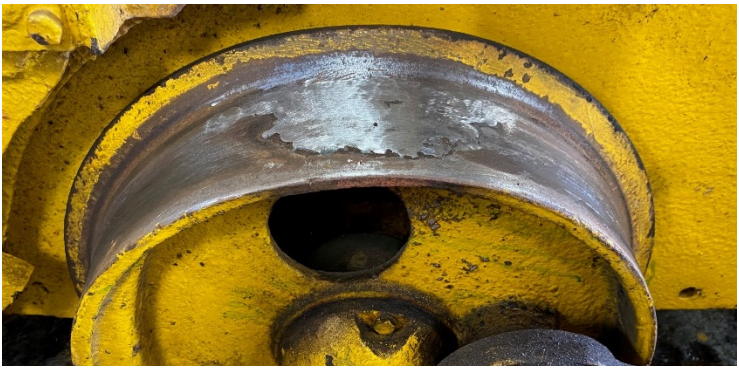
When restoration started the original seat stem tube was broken off from the attachment plate and the adjuster and stem were seized solid inside. After the old tube was removed from the stem by Ed with the gas axe, a new stem tube was made and welded to the attachment plate, this time with gussets to make it stronger. The original adjuster was removed, re threaded for a larger clamp bolt (the original had to be drilled out) The actual seat probably never had a cushion, perhaps it will get one in the future?

The problem of the overhanging battery box that obscured the coupler and buffer plate had been discussed at some length, shortening the battery box was going to be a massive job. An alternate solution needed to be found. I had noted and voiced that some WR5s came with rubber bumper blocks, but that would not of solved the coupler problem. I did however find one photo in some Wingrove and Rogers publicity material that showed a WR5 with a cast coupler/buffer block fitted to the front plate, one of those would solve both problems. The problem would be finding a suitable one but this was solved when one was fabricated by Ed and Charles, it can be seen below freshly painted and attached.



When initially tested it was noted that one of Baby Jane's wheels was dented which promoted a clank and limp like movement as she went along the track. The trough in the wheel was filled with weld and was first ground back to some sort of shape with an angle grinder and then was hand fettled

by Charles with the use of a brake shoe shape sanding block to attain the correct profile. Progress can be seen below.



A second pass of weld and more fettling, should see it as good as new.

The electromechanical controller that Baby Jane is fitted with, that I have restored, has three speeds, 50%, 75% and 100%' Going to 50% from static, with no weight behind the locomotive, occurs with quite a jolt as people have found out. Like NG24 the blue WR5 at the Great Bush Railway 'Titch' has an electronic Cable-Form 'Pulso-matic' controller that allows fine control and smooth acceleration. This type of controller would have not lasted well down a damp mine. I have the wiring diagram for this type of controller on a WR5, supplied by Brian at O'Kiefes. In around 2016 we scrapped an E-Z-Go Titan electric truck that came from a hospital, its controller dates from 2006 and is along the lines of a 'Pulso-matic' electronic controller (but in the modern way, more complex, but supposedly safer). Currently I am investigating if it can be made to work on Baby Jane. If fitted I would not compromise the existing controller, it could be done with a sort of disconnect, reconnect option to preserve the originality but in general operation make it a lot smoother to operate. I like this option, it's keeping my mind busy, I will report my findings in the next article, Andy.