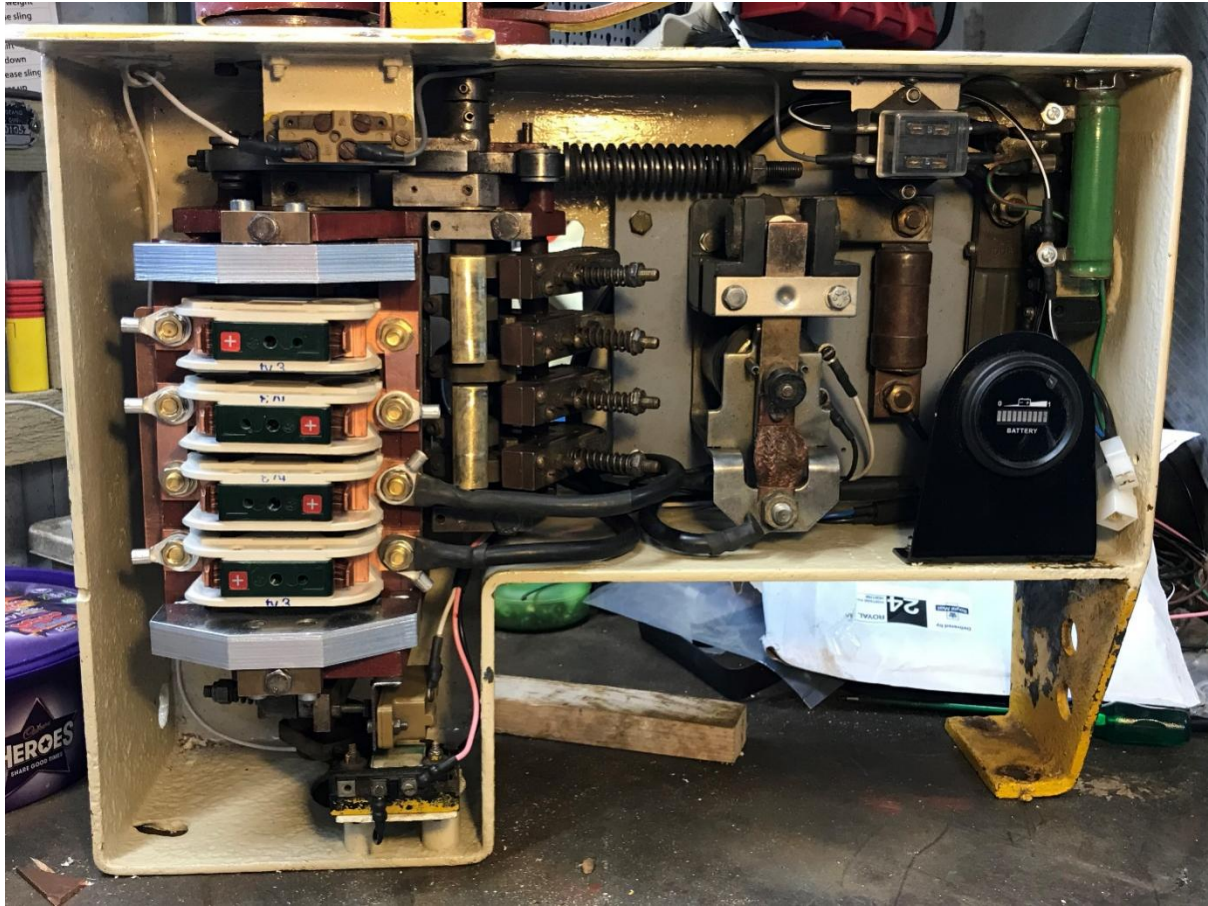


## BEV WR5 Baby Jane restoration / recommissioning - Andy Kemplen – Control Box Latest Report

I have been doing work on the control box most Wednesdays and sometimes at the weekend, in my own garage/workshop – let's start with a picture showing its state as at 29/05.2021.



As you can see it is looking quite together and the best it has been in many years, the most recent parts completed are the switch terminal post links that I have cut and filed to shape from 1/8" copper plate. In the picture above you can also see the brass terminal nuts, on each of the four switches, holding the links and empty cable terminals (these take the place of the actual cables from the motor and resistor on the locomotive) they are there to ensure there is enough thread on each bolt.

Also visible in the photo is the low current control and interlock/safety switch loom that I have created – this includes the fuses, light and horn switches with connectors, plus the battery condition gauge wiring.

To get to the trial assembly stage as seen in the photo, a number of tasks have been previously completed –:

- the forward reverse switch, had its contacts reshaped, polished and burnished and its contact force set correctly.
- the mechanical interlock/clicker assembly had new side plates manufactured to remove the excessively worn pivots to allow correct operation.
- the deadmans handle had to have a new operating pin made to function correctly whilst taking up existing wear.
- the main switch cam shaft had a stuck bush that had to be freed and repaired.

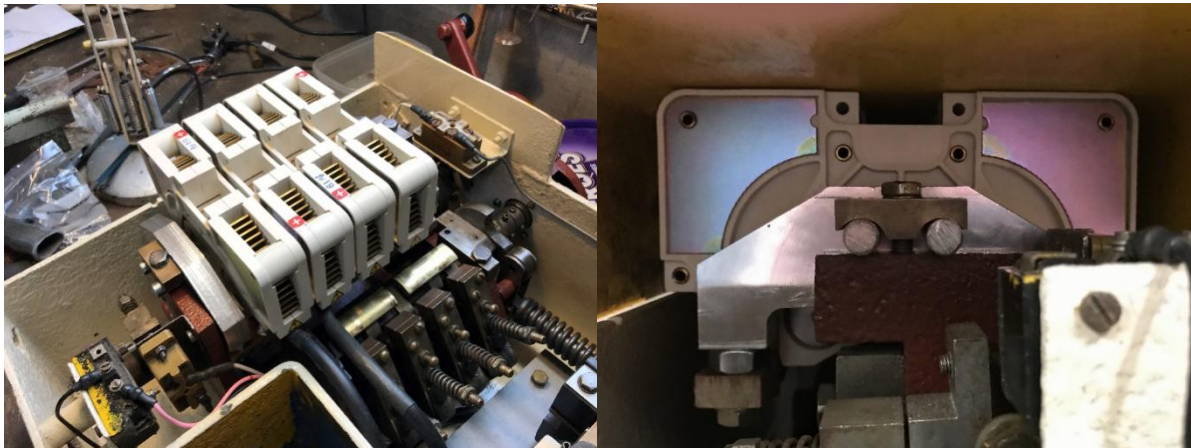
All of those tasks are captured in short videos, available via YouTube at the link below -:

<https://www.youtube.com/channel/UcKcQzYpbm1DxuoDbF2qkZwQ/videos>

My next planned tasks will be to fit some cable management clips to hold the low current loom in position to stop it from getting mashed up in the moving parts of the forwards reverse switch, mechanical interlock/clicker assembly and the main switch cam/deadmans shaft.

I then will remove the interlock and cycle timer switches, paint the bracket and add the new interlock switch that we got NOS from e-bay, if you look closely in the photo the original has a broken corner.

I then will have to deal with a new problem - the arc chutes sit on the top of the high current switches and safely channel away any arc flash occurring as contact is made and broken, dissipating safely the heat and preventing any possible burning that may occur (the BEV loco at the Lea Bailey Light Railway has suffered from burnt out contact switches in the past) In the pictures below the arc chutes can be seen fitted and then, viewed from the underside of the control box, through the cable inlet hole, with the cover fitted/sat on top. As you can see it is touching the top of the chutes and to the left is a gap at the side, the cover is being held up by them by about 1/2".



I will probably just make a cut out in the control box cover so it will fit correctly with the arc chutes fitted to the top of the new contact switch assembly. I will then manufacture an extension to the cover to enclose the arc chutes, out of steel plate of a similar thickness to the cover, this will then be welded on producing a small bulge in the cover so as to clear the chutes with sufficient clearance to prevent contact.

I will then, after a final assembly, be getting close to a position where it can be tested, before being fitted to the locomotive for trials.

Andy.