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## “A1 Peppercorn part 24, Final painting”

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If there is one thing I have learnt about model engineering, it's that you need to be able to turn your hand to many diverse tasks. I have now reached another new and critical stage, the painting! For me painting feels like diving into icy water, you can read all about it, you can prepare for it, but it is not until you actually dive in that you discover what will actually happen!



Spray painting unfortunately relies on numerous variables, the spraying equipment, the air pressure, the paint viscosity, the spray gun settings, the environment and of course the user skills and any one being wrong will screw up the result. What could possibly go wrong I ask myself?

Well, I may have mentioned it before, but I had actually painted my tender about a year ago. The result was not as good as I had hoped for, and after trying to convince myself it was OK, I finally relented and decided to strip all the paint off and start again. Seemed a bit drastic, but I knew it would forever bug me if I left it as it was. I decided that I would use thinners to strip the paint, however at Precision Paint prices getting enough thinners to dip the tender in would cost a small fortune. So, I went for a common automotive cellulose thinner at £12 for 5 litres, would it work though? Yes, after dipping in the thinners and using a stiff brush all the old paint peeled off, ready for a fresh start. Health and Safety Note; this needs to be done outside, the fumes are very strong!

What I learnt from my last painting attempt was that drying paint seems to attract every bug, fly or insect from the local area and beyond! So, this time I decided to invest in a portable spray booth, sounds expensive, but they were available on eBay for about £30, and I have to say that I wasn't expecting much, but it turned out to be a good investment. You can see from the pictures that once spraying is complete you can bring down the front netted cover and protect the paint from those pesky insects.

Whilst the tender was apart again for painting, I also decided to finish off the last outstanding job, which was to make the brake blocks. These were cut (by hand!!) from a piece of cast iron bar I had in my odds and sods box; I made a jig to bolt to the milling machine and to which the cut blocks were screwed to. Once the basic shapes were made, I cut the slots and drilled the fixing holes. You can see the final results in the picture.

So back to the painting, again I am far from being an expert, but I can give you my experiences (right and wrong), which may be helpful. I use the Pheonix Precision paints range, they are for sure not the cheapest, but I feel it is too risky to try something new and then find out it was not as good. For my spray gun which is an HVLP (High Volume, Low Pressure) type I use 30psi pressure, and that is 30psi with the gun in the open position, after shutoff the pressure is higher. For the paint I typically use 3 parts paint to 1 part quick drying thinner, the final coat may sometimes need a bit more thinning. The gun settings are with the spray fan almost fully open, and the paint flow set to low, then after testing on a piece of cardboard you can see how much paint is coming out, I try to get less rather than more. It is easier to make multiple passes of a thinner coat than trying to get it on in one pass. With my setup it is best with the gun no more than 4 inches from the job and keeping in parallel and steady, so the paint stays wet on the job surface.

For brass, which is most of what I am doing at the moment, I start with a first coat of single pack etch primer. I did try spraying this, but it is a nightmare and tends to clog up the spray gun, I now prefer to use a rattle can, again, from Pheonix Precision paints and not cheap but it seems to work well and avoids all the mess with the spray gun. I find a very thin coat is all that is required. This takes several days to finish reacting, and it is best not to apply any other coats until after this time. The next coat is basic grey primer, this covers well over the etch primer, it may not be necessary but because the etch primer is so thin there is nothing to rub down prior to applying the topcoat. Remember if it doesn't look perfect in primer it will not be better in topcoat, in most cases it will be far worse! Painting is 95% preparation and 5% painting. Remember failing to prepare is preparing to fail.

Fingers crossed most of the painting will be completed in time for the June garden party.



So those of you who made it to the 50<sup>th</sup> anniversary event you will have seen that I just about managed to get the painting on the A1 finished in time. It did however create a bit of an illusion of being a finished project, which of course it is not.



For those of you who looked more closely you would have seen that the steam pipes were missing to the cylinders and the pipework on the boiler back head was not done.

So back to the painting escapade, well as usual it threw up multiple challenges. They say you learn by your mistakes and your experiences, so here are a few tips that I discovered:

- 1) Precision Paints need a LOT of stirring. When you open a tin of green it actually looks blue! My recommendation is to make a small stirring paddle that fits into a drill and use this for at least 5 minutes. If you are using satin paint this needs even more stirring, for some reason the ingredient that gives the satin finish seems to migrate to the bottom of the tin and congeal into a sticky mass like rice pudding (or maybe that is just the ones I experience?).
- 2) I found that the green gloss paint for some reason needs a lot more thinners than that recommended by precision paints, who suggest 3 parts paint to 1-part thinners. Of course, you could invest in a viscosity measuring cup, but I found that counting the time gap between the drips on the stirring stick works just as well. Once you have found the best ratio you can copy it on future batches.
- 3) It is worth investing in some paper strainers to filter the paint before you pour it into you spray gun. These are relatively cheap, about 10 pence each and can save you from a disaster.
- 4) Trying to cover in one coat does not work!
- 5) Try on a practice piece before each session. Finding something is wrong on your prized model is not a good idea.

Enough about paint, back to the engineering. This was the first time the A1 has left my workshop and as you all know getting these models into the car is a job on its own. It took me at least a couple of days to make a base and be able to secure the loco into the car. Once I got to the club track, I did notice that I needed to add to the list of finishing jobs: - the ashpan door and operating levers which were a very close to the centre 3.5" rail on the club track. It looked fine on the bench and drawings, but clearly was too close for comfort.

Not an easy fix, requiring either a rework of the already complicated operating levers, or a more radical reduction of the ashpan discharge shoot itself. Something to ponder whilst relaxing in the sun!

I think the first task on my list will however be to remove the boiler and finally setup the chassis on air and at the same time check for any leaks before remounting the boiler.



Locos with centre cylinders make life a little more tricky if there are issues after the boiler is fitted as access is somewhat restricted. Once this is done, I will finalise the steam pipes to the cylinders, another fiddly job. My plan of attack for this is to get the pipework aligned without the smokebox fitted and then disassemble it, refit the smokebox and then the pipes. Following this the back head needs the pipework completing, which shouldn't be too difficult, although there does seem to be a lot of pipework under the cab floor, with both injectors fitted here.

Anyway, plenty more fun to come, even if the end is almost in sight!