

Diary of an ES250 Trophy/ Velorex Sidecar Project – Peter Fielding Part 2 – October 2010 -

Introduction.

In Part 1 of this saga, I documented the progress from a heap of bits through a trial assembly of the outfit and then a final assembly as a solo. The bike was MoTd in June 2010 and I have been using it as a solo for a couple of months to identify and resolve any issues.



I have been very happy with the bike, it has proven nice to ride and very reliable so the time has come to fit the sidecar.

Friday 1st October

First job was to collect together all the bits that had been powder coated and stored away plus all the other odds and ends that had been stored in a big box in the garage. Assembly of the sidecar chassis was pretty straightforward apart from a few tight spots where the paint was a bit thick. Getting everything lined up and the correct toe-in and lean-out settings took a while but eventually I got a satisfactory result.

Next step was to connect up the rear brake assembly. I had previously made a crude bracket to connect the bike end of the cable to the bikes rear brake lever. The cable I had sourced just about does the job for now, I will get a longer cable made up in due course. This apart, everything seemed to work ok, so I welded up the bracket to make it more rigid and ticked of this job from the list. Final job of the day was to make up a bracket to fit a hydraulic steering damper. Despite a lot of searching, I still have not been able to source a complete original ES damper. Not totally happy with the result (see

picture below, but it does seem to work so we will try it out on the road. At the end of day one we have a three wheeled vehicle though a long way from being a finished outfit.

Saturday 2nd October

First job of the day was to strip off the newly fabricated brake and damper brackets to clean and paint them. Next on the agenda was to re-unite the body with the chassis. On the face of it, not a difficult job but trying to find the correct bolts and get everything lined up took a surprisingly long time. Even more difficult was getting the mudguard installed as the bolts are hidden behind the suspension pillar. Finally it was all done so I stopped and took some pictures of progress to date. You will note that the sidecar wheel is actually a rear wheel from an ES250. This was just a trial to see if it was possible to use such a wheel (the Velorex wheel has a chrome rim and does not look quite right to my eye). Anyway, I have established that an ES250 front wheel will fit provided a suitable washer is made up to hold it in place. Just need to find one. Last bit of mechanical work for today was to move the front wheel to the forward location.

I then made a start on the electrics but this only got as far as fitting the front and rear light units. I then stopped to consider exactly how it should be wired into the bikes electrical system and where to site the battery in the sidecar. Not being able to decide the best way forward I decided that as the sun was shining and the grass was dry, perhaps some garden therapy was called for. At the end of day two the outfit looks as shown below.



Sunday - 3rd October

Well it took me all day but the outfit now has working set of side/rear lights and brake light. I decided to fit an ETZ250 rear light unit as this is more

compatible with the MZ brake light circuitry than the original Velorex item. I also have a thing about crimped electrical connectors and always solder everything when I do the bike electrics. Amazing just how long it takes compounded by a trip to the garage for more wire and shrink-wrap; oh and a trip to the local pub to meet up with some friends on the Bath Classic Motor Cycle Club run. The afternoon's work was interrupted by a domestic crisis involving the oven that had to take priority otherwise no dinner tonight. The wiring is also in place for indicators in the sidecar though I do not currently have indicators fitted to the bike and no clear plan on how to do it as yet. Fitting them on the sidecar is easy enough, the holes are already in the bodywork. The obvious solution on the bike is to use the original MZ bar end indicator for the RH side. However, this is not so easy as I have non-standard bars. Inspiration will strike eventually.

Monday 4th October

First thing on the agenda today was to reconnect the sidecar brake after painting the new bracket. Second job was to take the outfit for a trial run. Somewhat nervous but in fact in overall terms it was fine, the steering seemed much lighter than I remember on my old TS250 outfit, the benefit of leading link forks and the forward mounted wheel I imagine. The only points to note were the steering damper which does not seem firm enough at the straight ahead position, the gearing is far too high and the plot pull to the left when the back brake is applied.

Back in the workshop I tackled the gearing first and put on the a 17t gearbox sprocket – the book recommends a 16t but I found my old outfit coped ok with the 17t and it makes the plot a bit less buzzy. There was only just enough adjustment for the chain so I a new chain with 2 fewer links may be on the cards. I also played around with the adjustment of both rear brakes to try and get them better balanced. Part of the problem is the sidecar brake cable which is too short creating bends which are really too tight. I guess I will have to bite the bullet and make up a new longer cable – not one of my favourite jobs. The steering damper issue I have left for now, it was more an irritation than a serious problem. One other thing I finally remembered was to put the security bolt in the sidecar brake arm to stop it turning on the splines.

The passenger safety belt is now fitted, I found that the rear bolts holding the body were in the ideal location and of the correct size so that was an easy job. I then fitted the screen and this does make an enormous difference to the appearance. Final job for the day was to dig out a couple of old BMW 30ah batteries to see if either would take a charge (and hold it for a reasonable period as well). One at least looks promising, will know for sure in a day or two. A mounting platform and securing straps were fitted in the boot to hold the battery firmly; failure to do this properly caused me some grief with my old outfit so a lesson well learned here.

The tonneau cover was the next item on today's list. It is not brilliant but it will do for now. However, it did not seem to be long so nor did it have any fasteners at the rear. After some thought, I extended the rear section with a piece of strong flexible plastic (a piece from a lorry wheel arch; brilliant stuff with a million uses - thanks Steve). Some s/s bolts inserted from the inside of

the body provided ideal fasteners and I turned up some nice knurled nuts on the late to make the job look professional. The seats were also fitted on a trial basis, they are pretty scruffy but not really a high priority matter as they are now nicely hidden by my modified tonneau. All in all a good days work.

Tuesday 5th October

Only a couple of jobs completed today. The old BMW battery I charged a couple of days ago was still holding a good charge so I decided it was safe to use it. The housing in the boot was already completed so all I had to do was run cables from the battery to their locations on the bike and solder on the appropriate connectors. I ran out of tubing to make the job secure and tidy so this aspect will have to be re-visited but otherwise the job is done and the on-board battery is now redundant. Its removal will allow the installation of a proper oil tank.

Second job was to make up a longer cable for the sidecar brake. I managed to find the components but chickened out of trying to solder on the new nipple. A trip to my friend Mike, who is retired plumber, sorted the matter but by the time I got home it was too late to make any further progress that day.

Thursday 7th October

Life got in the way of the project for a while but I did manage to get some time on it today. The new brake cable has been fitted and some time spent getting the adjustment correct so both rear brakes work together. Still need a road test to prove its ok. I also removed the original battery and temporary oil tank so that the proper oil tank could be fitted and connected up. This all went fine, then I hit my first hiccup, the LH side cover will not fit with the oil tank in place. It's not just question of moving it back a little, it is also too wide. Pragmatic solution for now is to do without the side cover. As it's the side closest to the sidecar it does not stand out too obviously. Looks like I shall have to find or make a suitably shaped oil tank but it's no big deal.

Wednesday 20th October

Once again other projects have interfered with the completion of the outfit but in truth, there is no desperate rush and I would rather take my time and get it right than rush to finish it. The indicators are a case in point. I searched high and low at the Shepton Mallet autojumble for something that would look right without success. Irritatingly, I did find some suitable candidates but always as single items, never a full set. Then talking to a friend a few days later, we had a stroke of inspiration and within a day the indicators were done. Basically they are all standard MZ items mounted on some very strong black plastic sheet (used as mud flaps on lorries) using short versions of the TS style front stalks. The latter made out of 10mm bolts drilled 5.5mm to take the wires.. The result was a neat, flexible setup which cost nothing but time as all the bits were already in the garage. – a good result.

I finally also found a suitable plastic container as an oil tank which has now been fitted with a bottom feed tube. Fitting will have to wait as the present oil tank is full to the brim and trying to swap it right now would be messy and wasteful – but at least I have a solution. As the new tank is only .5l, the fitting bracket will include space to store another .5l container for topping up.

I also splashed out on a new headlamp surround as the old one was cracked and had bits missing. The black painted exhaust pipe is now beginning to stick out like a sore thumb so that will get replaced as soon as funds allow.

This is how the outfit now looks. I am really pleased with how it has turned out.



Still a few things to do however.

New exhaust pipe

Find a better sidecar seat (rear seat from an MPV seems favourite)

Find a proper sidecar brake arm (Jawa?)

Fit better oil tank

Fit 130 main jet to carb

Fit an MZ front wheel as sidecar wheel