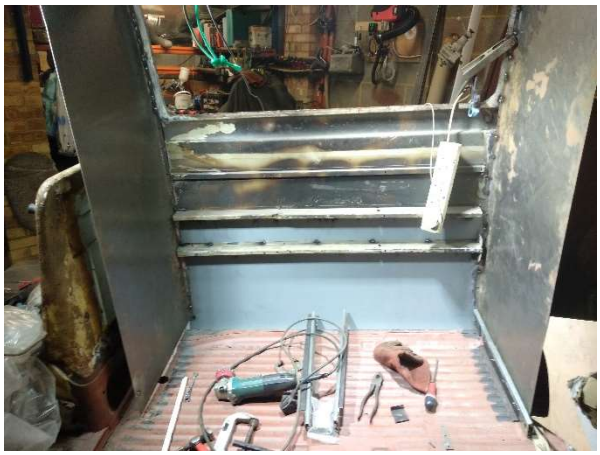
Eric the Viking – a restoration in many parts – February 2022

Spend since last report: £63. Total hours labour since last report: 20.9

In last time's thrilling episode of "What hare-brained scheme has he come up with now?", Eric was starting to receive a metal box to hold the kitchen – hob, sink, fridge, gas bottle, larder and so on. The premise being that all of that takes floor space which is in limited supply. Big modern RVs have sections that slide out to increase the floor space, why can this not be done in a Bay window?

We had got as far as 4 kitchen drawer style runners on the cargo floor, a metal tray was sitting unconnected on top of the runners. The original outer wall of Eric beneath the window was still as it left the factory – welded to the B and C posts to give us a reference point. This means that if everything is attached to that fixed "wall", then the whole thing will be in the right position.

The left side of the kitchen that is behind the driver's head, and the right side of the kitchen that is in the middle of the cargo floor were made last time but needed minor adjustments to fit to the curving outer panel (Pic 1 – Sides are on)



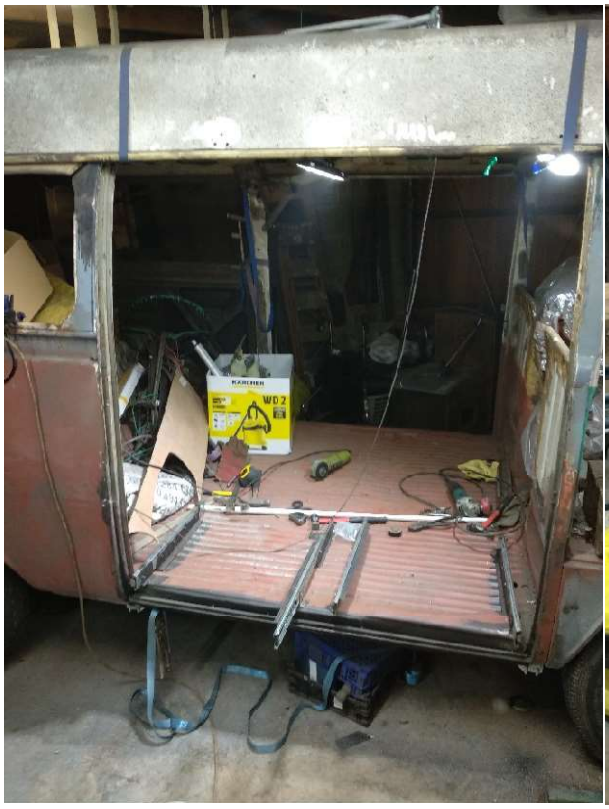
With the sides on, we now have the beginnings of a box. The top of the outside panel however has no metal above the window as the roof was cut off due to being rotten (Pic 2 – Window top missing). This means that once the outside panel is cut off, it will be weak up there with the potential for movement / flexing. I did not have steel long enough, but was able to cut two rectangles of steel and weld them together then weld above the window hole (Pic 3 – Window top added).

Now that 3 sides are on and the base / floor / tray is square, after a little adjusting of the tray where it joins the outer wall, the tray was welded to both side walls and the outer panel. My spot welding is now of sufficient quality that I am no longer grinding them down! (Pic 4 – The floor goes in)

Notice the grooves running side to side on the tray – they make it flex less by providing strength and were made using my Christmas present from my wife, a metal swager.

Then came the scary bit – cutting up the sides of the outer panel to separate it from the vehicle for the first time in nearly 49 years. Now both sides of the van are draughty!

(Pic 5 – No side panel) and (Pic 6 – The pod is on the floor)



Finally, the pod was bolted onto the runners and the actuator arm, and at 7.04pm on a Tuesday evening (I know because I had agreed to go indoors at 7pm for dinner!), I took a video of the pod electrically gliding out of the van with the remote control. It was quite emotional!

Next job is to make the lid / roof of the pod that will keep the rain off, be slightly inclined so that rain runs away from Eric, it joins the side squarely and strengthens the slightly flimsy new bit above the window. Once that is on, I can add runners at the top, a worktop across the middle, the hob, the fridge and holes in the floor for fresh water in, and grey water out.

The spending this time was £62.63 on steel box section to make the front bench seats, but that is a story for another day. Hoping to see many of you at the Petruth Paddocks event which happens just before we go to print for the next magazine.

Eric the Viking – a restoration in many parts – April 2022

Spend since last report: £272. Total hours labour since last report: 17.9

How has the editorial deadline come around so rapidly? Seems only a few days since I last wrote an update on progress!!

Last time I had taken the slide out pod and got it vaguely running electrically out from the van. The amount of space regained will really pay off, but it is a lot of hard work planning, fabricating and testing. The next part of this puzzle was the roof of the pod to make it watertight and therefore warmer when open. A sheet of steel is actually not very strong but my new swager helped – adding grooves along the long length of the roof rectangle made the sag of the sheet reduce then each edge was folded over to attach to the outside panel and the new walls.

Now the box has a straight edge on the inside of it for the pod floor, roof and sides. This is where the kitchen parts will go but the unit itself will sit slightly farther out of the van meaning that I must add a skirt all around. This was planned as the additional sections would be spot welded and joggled adding strength along the length for minor extra weight. The curved edge of the sides allowing for a door rubber to seal the edge of the pod to the edge of the van when the pod is out.

This took quite some time even using CAD (Cardboard Aided Design) but I got there in the end. The roof of the pod was still a little saggy in the middle even with the folded down lip in the inside long edge and I was not confident that the apron would provide enough extra rigidity. Fortunately, one of the steel lengths that I had used for bracing was part of a bedhead that I had been given – rectangular 1cm box section steel, strong and lightweight and after cleaning it of loose paint, that went onto the inside edge of the sliding pod roof, reinforcing the front lip. Then I was able to add the roof apron of

14cm front to back of steel with its folded over edge used to join to the rest of the roof. Now it does not bend. A little seam sealer along all the joints created should minimize water ingress to the seams that would cause premature rusting.

With the slide out pod mainly constructed; the next detail was to use 4 shelf support brackets that have been in the toolbox for years. Instead of countersunk screws, I clamped the bracket in place and filled the convenient holes as if they were spot weld holes. Now I have smooth brackets mounted on the sides of the pod ready for the worktop which will take the sink and twin burner.

Progress paused on that for now until I can work out how to have a spike out of the bottom of the pod onto the ground to support the weight of the pod when in use. I want this to be quickly retractable, ideally permanently connected to the pod a bit like a bicycle kick stand but it needs to be adjustable as the ground might slope. Even more useful would be for this support to stop the 25 litre water bottle that I want outside from being stolen. If anyone has any bright ideas, do please let me know!

With the inside of the van having 4 runners at the bottom, I next moved to the spaces between the runners. I want these to flex enough for the pod to glide no matter what the ground does to twist the chassis, but I also want to reduce gaps to insulate the inside.

Some offcuts of steel from the pod apron proved to be an easy trim and were mounted. Note the space outside the new steel allowing a small amount of space under the pod right by the outer panel. This will be for water inlet pipe, grey water outlet pipe and potentially the above noted stand.

I am not sure how the pod roof, the apron, the refitting of the steel above the window and the little bits of filling / sealing managed to take nearly 18 hours, but they did.

Spend this time was the steel for the roof of the pod (£33 as I favour slightly galvanized for longevity), yet more cutting disks, gas for the welder and some sandpaper to rub down the filler that I am applying to finished sections of the project. Oh, and a cheeky bid on eBay bought me an engine case for the planned 1776cc engine build. One day I will get to that point. The engine case was collection only and towards 200 miles from my house. Fortunately only 20 minutes from my parents though, who kindly agreed to pick it up for me – I did check before I put in the bid!

Next up I hope to receive the engine case, continue the pod final bits, finish the section between the runners and then move onto the front seating – all of it needs doing before I can turn him on his other side and finish the underside.

Between writing web site articles, club camps coming up and the inevitable gardening assistance as the weather warms up, I hope to make at least some progress. Meanwhile, enjoy your vehicle – either working on it, looking at it or getting out in it.

Eric the Viking – a restoration in many parts – August 2022

Spend since last report: £160. Total hours labour since last report: 25.5

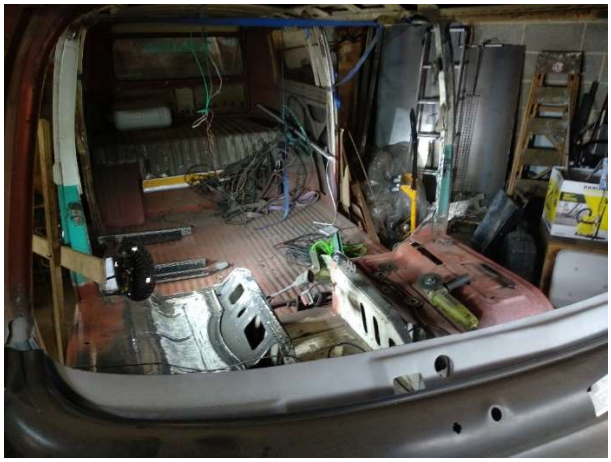
In February 2022, I worked a lot of hours and managed to do 21 hours on Eric. In March 2022, I worked a lot of hours and managed to do 15 hours on Eric. Then I retired and had no time to get in the garage again until August! They say that you wonder how on earth you managed to find time to work and for sure, I am keeping busy. From April to July, my first four months of retirement included 36 nights away in Poppy, my wife Lorna's 1972 Crossover, including club camps at Cheddar, Great Bourton, Odiham and RAF Odiham! I also reupholstered 2 sofas, built a large timber deck for a friend, a car port, and numerous other projects.

Finally in August, I felt that I had enough items complete to venture back into the garage to see Eric. For anyone new, forgetful or just venturing into the magazine – I bought Eric in August 2015 as a blind purchase on eBay, he had been rotting outside for many years and was in a terrible state. The previous ten years of MOTs were a litany of corrosion, underseal, advisories and decay, spend on him was minimal and the mileage shows he did not get used. I am now at 862 man-hours of labour on Eric. Yes, 862. The project plan lists another 300 hours to go and total outlay excluding my labour is projected to be £17,000, just don't tell my wife!

The first job after time away from his restoration was also the reason for not getting back to it – the scary piece of chopping the bulkheads from behind the seats. Given that some Bay window vehicles have no bulkheads, I was happy to do this from a strength perspective as I was putting in further metal to brace the B posts. Out they came! Then some 20mm box section steel was cut up and welded to make a rectangular back rest for a bench seat going the full width of the van. Then I repeated it to make a rectangular seat base for the bench seat. The bench seat is inclined very slightly to match the original seats and is mounted to the floor on welded brackets. These brackets effectively make hinges that are about 6 inches from the front of the seat mounted on the tubs approximately where the original seats were mounted.

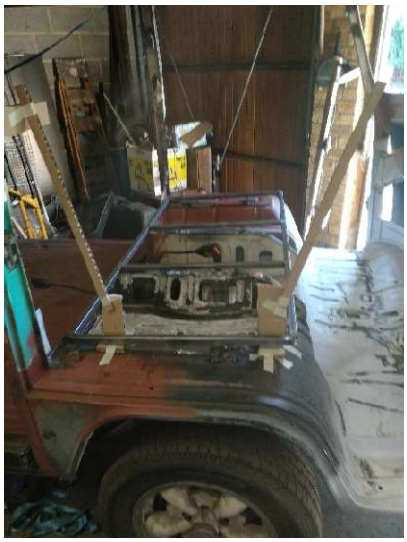
Two bulkheads

No bulkheads



Bench seat frame

Cardboard back rests to assist the arm placement



Serpentines, coils and outer in place

But why go to that length? The base is hinged, and I then made some blocks to go at the rear of the base. This makes the base inclined slightly the opposite way. Then I made “arms” for the back rest and after much mocking up with corrugated cardboard, the offside and nearside arms and their brackets were fabricated from 2mm steel plate. These arms support the back of the seat allowing you to drive in comfort. Once you get to your destination, the arms can be repositioned allowing the seat back to face the opposite direction. With the base also inclined in the opposite direction, Eric should end up with a sofa facing backwards. That cannot quite be finished yet as the back rest height is determined by the height of the seat base. Following the standard seat design, I welded some coil springs to the base frame down the sides of driver and passenger. Then I welded some serpentine zig zag springs front to back in between them. These sit on little bits of serpentine spring blow torched to bend to the right height. This now looks very like the original seat, and I added a steel string of 3mm diameter all around the outside to help the fabric sit correctly. Two front seats with metal as per the original for long distance comfort. Hopefully.

Next up, I need to add serpentine springs to the back rests for driver and passenger per the original design and work out exactly where the back rest will sit, then attach it to the arm.

Malcolm and Val joined us for my birthday weekend and the demo of the seat and the slide out pod (see previous issues) went well. As ever, Malcolm offered his thoughts and ideas which greatly helped refine the rough edges ready for implementation. Welding new steel is so much easier and more fun than blowing holes in rotten metal!

Eric the Viking – a restoration in many parts – October 2022

Spend since last report: £274. Total hours labour since last report: 72.66

In the 2 months since I last wrote an update about Eric there has been a lot of change. Fortunately, I note what I do each trip to the garage, how long I spend in there and I also document every purchase, just don't tell Lorna the total! This makes it easier to write it up as I have clear "notes".

The serpentines arrived – wavy bits of metal that provide the suspension for the seat backs. Initially I used the clips that came with them, but it was all very loose, so each serpentine was welded to the next one. At the sides, I used shortened sections of the serpentines bent to 90 degrees and welded in place as that seems to be how original seats are done – I was able to use the crème brulee torch that I bought about 15 years ago and had never used except for lighting the fire! It all looked fab and received rust proofing paint, primer, and black topcoat. Then I added some plungers purchased online to allow the seat back to lock in place for either driving or camping, sadly I put them in the wrong place and had to do it again the next day!

With the base almost complete, I spent more time on the seat tubs as they have some extra strengthening added for the arms of the seat back. It is starting to look good. I suspect that there will need to be some minor fettling when I get to upholster the base and back, but for now I am calling that section complete.

Following an email chat with a race engine builder in Warwickshire, I put restoration on hold and stripped an engine for the first time. My wife's 1972 crossover Poppy had an engine replacement in 2015 when the case was found to be split, tipping oil everywhere and the engine had sat in the corner of the garage ever since. I bought a 1776 Mexican case online that was drilled for full flow (external

oil cooler ability), but I did not really know what that meant. It took me just over 5 hours to strip the engine from the rockers inwards. From this “long block”:

And down past the barrels and pistons to piles of engine bits!




Don't they all look pretty? I set a date with the engineer and toddled off in the rain for 90 minutes to see him, armed with a car full of engine parts from Poppy's engine and the new case. All he needs to do is build them up into a fabulous engine once I buy the new, larger barrels and pistons. Unfortunately, as with most bits of this restoration, the theory was better than the practice.

The case that I had purchased online was a "good Mexican case" which turned out to have case saver studs, corrosion, had already been align bored and signs of very bad treatment. The drilling for full

flow / external oil cooler had been done badly and is for a Beetle – the mounting bar (aka moustache bar) for a Bay window means that those holes cannot be used. Sadly, this is becoming increasingly regular as the cases are old and have not been made since 2014. Never mind he said, I will see what I can do once it is fully cleaned, tested, and measured. Which costs money and might end up as unusable anyway.

Next, we turned to the crankshaft. It has been ground several times and is very worn. He will polish rather than grind and see if it allows it to be used. Which costs money and might end up as unusable anyway.

He looked at the heads and gave them back to me. Totally shot, not even worth trying to resurrect. New heads required. Which costs money.

Finally, he looked at the flywheel. It needs to be 21mm deep between the inner and outer levels and was 20.34mm and the milling to that height had been done badly. New flywheel required. Which costs money.

In summary, I spent 5 hours dismantling an engine and nothing from it is usable. I spent £150 buying a case that is potentially no use either.

More work was done that that, but I will save that for next time. Enjoy your winter whatever you are doing, and I hope to see you in 2023 at a club event in a field.

Eric the Viking – a restoration in many parts – December 2022

Spend since last report: £2,747. Total hours labour since last report: 52.05

As 2022 draws to a close, I am prompted to look back at the progress made this year. Ahead of what happened this episode, here is a summary of the year:

- The driver's side middle window and panel were removed from the side of the van and became part of a kitchen pod that glides out electronically from the vehicle once you are camping. This will hold the fridge, larder, worktop, sink and hob. Once out, there will be space outside on the ground underneath it for the fresh water and wastewater.
- The bulkheads behind the driver and passenger seats were removed, reinforcing plates were added for strength.
- New front seats were made that can face forwards for driving and backwards once parked allowing seating for 2 facing backwards. This is in addition to the 3 facing forwards on the rock and roll bed settee. The front seats have a back that flips to face the correct direction.
- A new engine case was purchased, which was then cleaned, prepared and align bored but ultimately turned out not to be up to the standard required for the race builder to put his name to it.
- Poppy's old long block engine was dismantled and taken to the same engine builder. The parts could be used for a standard engine but not for my requirements.
- Eric's complete engine was dismantled and I plan to rebuild it as a long block in due course.
- A new 1776 engine is being prepared by Stateside Tuning in Oxfordshire. The only reused pieces will be the ring gear and part of the valve set. This will mean that the engine builder will be happy to say that all components are good. This is why there was so much spend this time – the deposit has been paid (and I bought the upholstery fabric but that is a story for another day) on a new engine, not a reconditioned one.

In addition to the above, I have also made progress elsewhere.

The front beam has been dismantled, removed from the van and was hanging on a block and tackle for ease of movement. It is an adjustable beam of unknown origin that came with Eric. The bottoms of the clamshell sections that form the chassis mounts were both rusted, but were by no means unsalvageable – cutting out the minor amounts of rot and replacing it properly with butt welded sections made for a great look. Much easier and more satisfying than the work on the vehicle that has been rather worse hit by rust!

Each component of the front suspension, steering and brakes was removed and either stripped, painted in anti rust treatment, primed and painted or was replaced. The brake calipers have been painted in 3 coats of bright green Kawasaki high temperature paint and all other components were top coated in John Deere tractor paint in gloss black. This was a recommendation some years ago and the colour and protection are great.

Then with the beam off the van, I was able to tackle the chassis rails in the sections that had been hidden by the beam. As this was only about a foot on each chassis rail, it did not seem like a long job however, the access is only by laying on the ground and understandably, 50 years of water, mud and rust had accumulated to rot out a large chunk of this. New sections in 2mm semi-galvanized steel were fabricated up and welded in place, and with new thick steel onto nicely tidied chassis 2mm steel, this went in smoothly and with minimal grinding required. Once fully smooth, again this was rust proofed

and primed but top coat on the chassis / underside is the original L90D pastel white. I am using synthetic enamel for its hard wearing and easy to apply properties.

Once finished (first picture), and with the anti roll bar back in place complete with the new rubbers and mounting brackets, it all got a final check before calling on a neighbour. The recommended way to refit a beam is to get it under the van and jack it up on a trolley jack, keeping it horizontal and continue lifting onto the chassis rails.

I had a brainwave and for once it worked out well. We wheeled the finished beam to underneath Eric, ensured that it was approximately as vertical as needed. Eric was on the block and tackle to get it high enough for the beam to go underneath, then we simply lowered Eric onto the beam, which was therefore completely flat and the sheer weight of the van helped press the chassis rails into the beam. A few little wiggles and we were able to get the first bolt on each side before a little further wiggling could get the remaining bolts into the chassis. From the beam being up on the block and tackle, to moving the beam, lifting the van on the same block and tackle, lowering the van onto it and aligning all bolts took 45 minutes. We felt that was a big result! Picture 2 shows the offside front wheelarch, all painted in white with the beam in place and shiny green calipers.

Picture 3 shows the chassis under the beam, the lumpy underseal was hiding some gremlins but new steel sections have made it all strong again. With the chassis rail opened, I have been able to add rust proofing paint to the insides of the rails in a lot of places and will follow that up with underseal in due course.

Once that was complete, Eric had a beam with which to roll him over. The garage was suitably tidied and emptied, Eric was turned nearly 180 degrees (not easy in a double garage) and the offside wheels removed. The rollover jig was bolted in place of the wheels and Eric was laid onto his off side. This allowed me to get to the underside to work on the sections not easily accessible when he was on his other side a year or so ago. The key section here was the nearside rear chassis rail. Picture 4 shows the remains of the chassis rail – I knew this was bad when I did the other side of the same section. If you have a box that has seen better days, replace one side then the other – more reliable for positioning than replacing it all at once. Just behind the torsion tube was about 30cm / 1 foot that needed a significant section replacing and as it was curved, this was done in 3 sections, again rust proofing the inside as it became accessible. Anything rusty was cut out. The mounting bracket of the

bump stop was removed as that was very bad, new sections fabricated for that before welding that back on to fresh steel.

It looks much better with steel instead of holes! Picture 5 was when the rust proofing paint was still wet, once dry it goes purple and then the primer went on twice and several coats of L90D top coat as well.

A similar story on the offside rear wheel arch – remove buckets of underseal, get visibility on the metal, remove the paint unless it is looking great. Remove rust, add new metal if required, rust proof, prime and paint. Once all of that was complete, the majority of the underside is now done – just minor bits that were missed plus the underside of the fuel tank to go then it is build up time. Picture 6 of the offside rear wheelarch and bump stop all clean and white made me feel rather good!

With that section complete, I was able to tackle the offside rear suspension. Nothing major here as it is heavy steel that needed stripping and again rust proof / prime / paint. On investigation of the driveshaft, this was ok but the CV joints were sadly not – I had bought new gaiters for the CV joints and now need to buy CV joints. Which come with gaiters. That outlay will have to wait for a while until I feel happy about paying good money for something that I already own!

Next jobs are – assemble the rear drum brakes, add the brake cables, brake pipes, find which brake servo is which and where they go. Add the brake flexi pipes to the right places, join everything up. Add the steering box, connect that to the beam. Gear selector mechanism. Air heating pipe completion. Finish cleaning the gearbox, prime it and paint it, mount it, add the driveshafts once I buy the CV joints. Around that time I can put Eric back on his wheels for what I hope will be the last time. Perhaps I will manage that for the next issue but it is cold. And that list feels daunting! Until next time.