

# **Rufus - Connecting the Rear Wiring Loom, Brake and Fuel Pipes.**

## **Introduction:**

As purchased Rufus had been very poorly built and had lots of faults that were readily apparent. The original build was so poor that I decided at the point of purchase that I would not to even attempt to put him on the road; instead I elected to do a full restoration. The person I bought him from had purchased him from the original builder and he was well aware of the cars shortcomings. The end result was that I negotiated a price that was 50% of the original asking price; the important thing was that both the seller and purchaser were pleased with the final figure.

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## **Major faults discovered during strip-down:**

Once Rufus had been delivered I started work and as the strip-down progressed I found further faults. Two noticeable major faults were an incorrectly positioned pedal box with both the clutch and brake pedal to the left of the steering column. The second major fault was the routing of the front to rear wiring harness, fuel and brake pipes. These were fastened on the underside of the body and where chassis members were encountered the components were simply looped underneath before returning to another body fixture.

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## **Routing of the wiring harness, fuel and brake pipes:**

Previously I had built a chassis for a four wheeled car in which I had welded steel tubes in the chassis cross members to allow the wiring harness, brake and fuel lines to pass through. Emma my NG TD has a simpler system and the components pass through holes in the chassis before split rubber hose is inserted to protect the components. I found out later that this is common practice on the later NG's.

Initially I considered the simple hole and split rubber hose approach but having experience of the DVLA's approach to chassis modifications I decided not to. (They confiscate your original VIN, plus any accrued Historic Vehicle Status). You then have to take the car for an IVA test before they issue you a 'Q' Registration Plate). Their latest victim was just this month when the owner of a modern Renault decided he wanted to use it for occasional 'Track' use. It turned out he had drilled five holes in the chassis section of the monocoque body to secure a roll-over-protection-bar. When the DVLA found out they withdrew his VIN and the car is now SORNED until it successfully passes an IVA Test, 'Bast\*rds'!

I decided that my front to rear items would be attached to the body only. Initially I considered putting them close to the transmission tunnel clear of the chassis in-riggers but there was not quite enough room. After careful measurement I decided to put them in the edges of transmission tunnel.

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## **The final solution:**

I am a great believer in stainless steel 'P' clips with rubber inserts but they don't last forever and for this installation I decided to use brass 'P' clips from Car Builder Solutions. The clips have M5 securing holes and I used M5 stainless steel button heads with the button head on the inside to prevent bulges under the interior carpet.

The fuel and brake pipes run down the right hand side. The rear axle flexible brake hose has to be fitted to the axle before I can fit it to the long brake pipe.

The Facet fuel pump is in an accessible position and will require a simple connection to the fuel tank via a filter. The main fuel pipe is Nylon with M6 external diameter and is fully resistant to current 'E' fuels. I personally think that M6 hose on an M6 pipe is not always a secure fit and I tend to use M5.5 hose; the pipe and hose were obtained from 'ECAS 2CV Parts'. To secure the hose to the pipe and pump connections I use 'double eared' hose clips.

I always use ten-core trailer cable for the main wiring harness. A waterproof junction box will be fitted behind the left hand rear footwell (to mirror the fuel pump location) it will receive short harnesses from both rear lights, the fuel tank sender unit and the fuel pump. I also plan to run a dedicated harness from the junction box to a service battery that will power a cool box for summer picnics. I intend to build-in a small secure luggage/boot area to facilitate this.

The photos should be self explanatory.





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**Summary:**

My views are that on a TA this is the simplest way to do it. If ever I need to remove my body it will (after a few minor disconnections lift away completed with the main wiring harness, fuel tank, fuel and brake pipes.