Repairing the buttons on a TVR Tuscan Dashboard Binnacle

This example is based on an early Mk1, though I can't imagine the later ones Mk1s changed too much.

This is how I did it, the, you are responsible for your own work and the repercussions thereof. Work safely. Don't come to me if you screw it up.

The TVR Tuscan dashboard basically has four buttons – from top left and moving clockwise, these are - Fog Lights, Hazard Warning Lights, Dashboard Display Rotary Switch, Light Switch.

This picture sourced via Google – I forgot to take one of the front.

In my case, the Dashboard Display Rotary Switch had failed – it no longer accepted any commands for either its rotary or push-button functions. The internals of the dash are fairly symmentrical so this walk through will also be useful for anybody who needs to repair the fog light / headlight side too.

Tools

Assorted Very Small, Small & Medium sized Philips and Pozi-drive screwdrivers, long and short reach.

Very small Allen Key (1 – 1.5 mm?)

Torch

Electrical Contact Cleaner (best case)

Soldering Iron & Spare parts (worst case)

Difficulty

The job is slightly fiddly in places, but by no means difficult. Anybody with a steady hand should be able to do this… 2/10 difficulty rating imho (and I'm no professional – just a home tinkerer).

Preparation

First off, remove the roof and wind down the driver's side window – you'll need to look through the windscreen later while working on the dash so access and visibility are key.

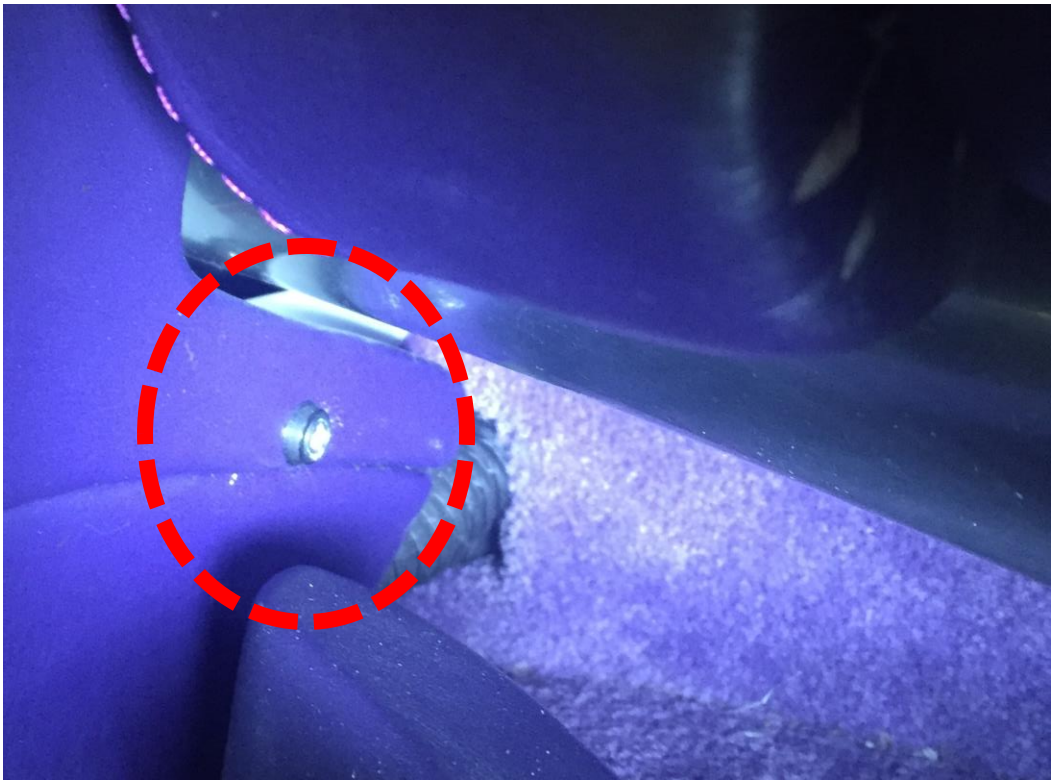
Second, clear off the passenger seat and the parcel shelf so you have lots of room for storing your tools and the parts you remove. Load up the passenger seat with your tools and place the screws and parts you remove on the parcel shelf so they're out of the way.

Method

The dashboard comes in two parts, upper and lower. To remove the upper half, undo two screws, one on each side.

Right side:

This one is fiddly because I couldn't get my hands in to the space to undo the screw. I ended up making a long screwdriver using some ¼" extensions and a screwdriver 'bit'… dead easy.



Left side:

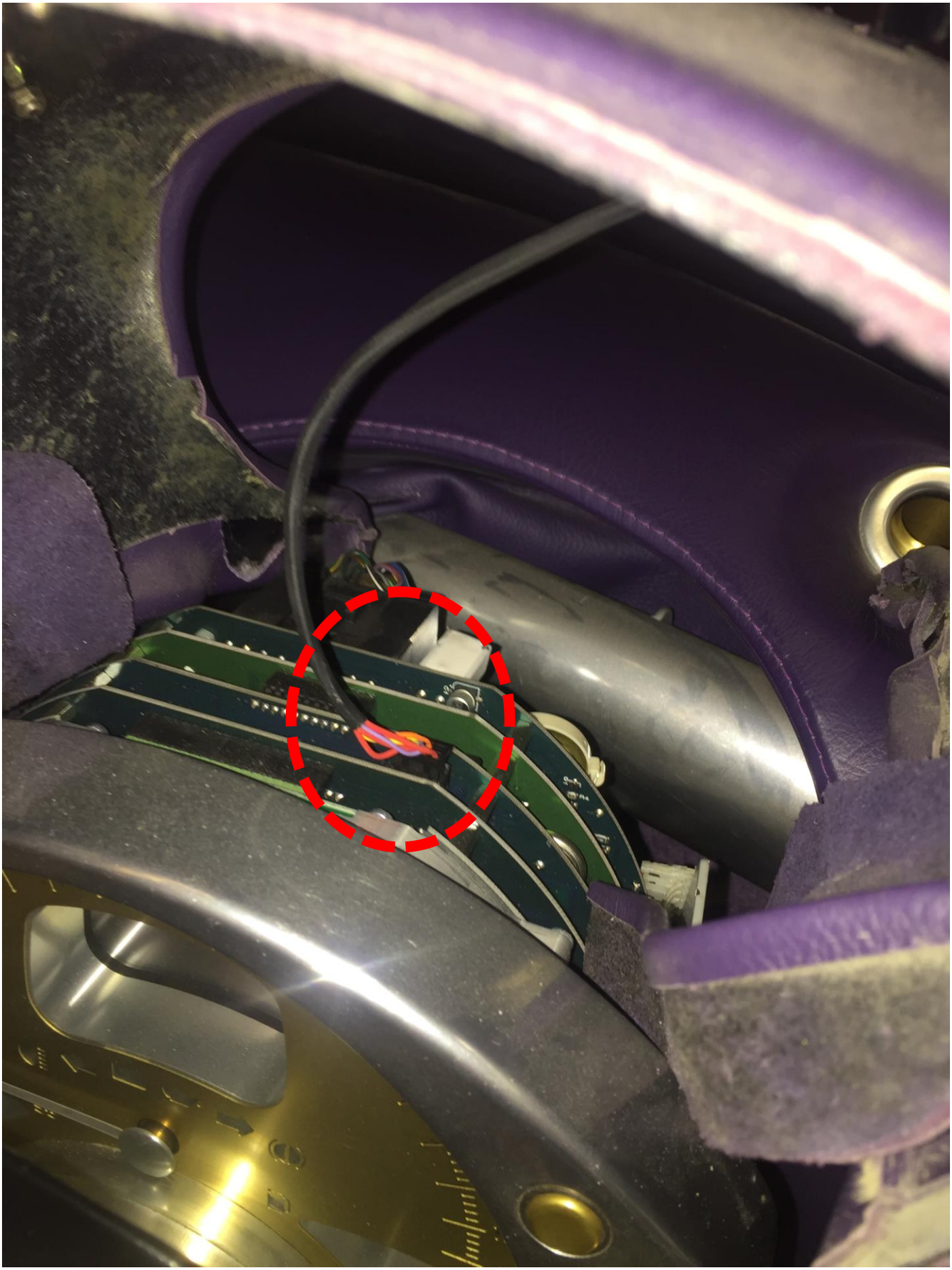
Dead easy to undo (pictured partially undone)

The screws aren't very long;

Once you have the screws out, drop the steering wheel to its lowest position by using the handle on the lower left hand side of the steering column. Once you have the steering wheel as low as it'll go, push the top half of the dash 'backwards' (ie, towards the front of the car). It might take a little jiggle, but you'll see it separate from the binnacle… it'll move about an inch or so.

Once you've separated it like the above, you can then pull the top part of the dash up and towards the rear of the car.

There’s a long wire that connects the rev lights to the dash – disconnect it from the dash PCB (just pulls off) and store the top half of the dash on your rear parcel shelf.



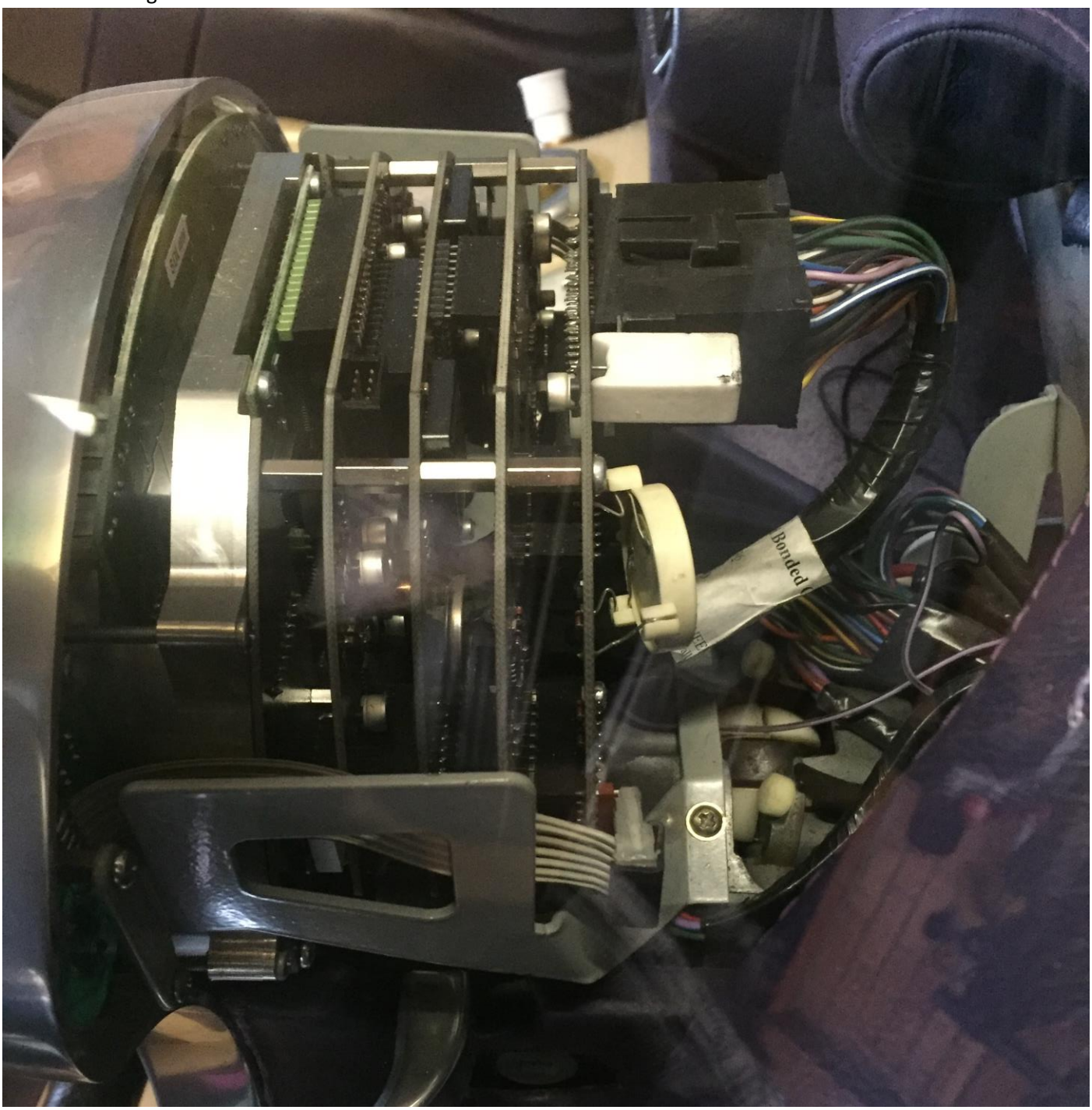
Top tip!

The rev light assembly is mounted on to the upper part of the dashboard with 3x 5.5mm nuts and all three of mine were loose. Tighten them up and that's one more rattle (mostly) fixed ☺

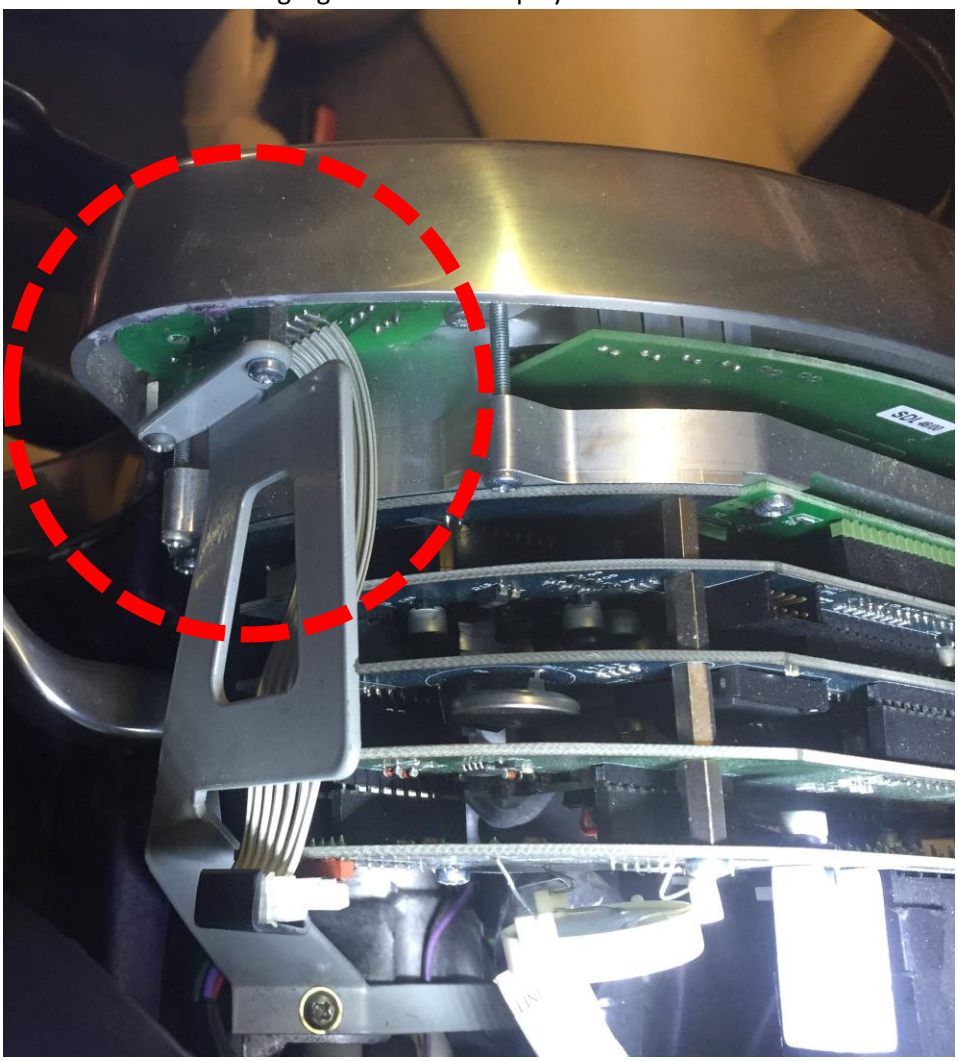
With the top half of the dashboard removed, you can now see the PCBs in the binnacle.

View from passenger side

Side view through windscreen



View of Hazard Warning Light and Dash Display Switches PCB



View of headlight and fog light PCB

The access procedure for either PCB is the same. This example focuses on the Hazard Warning Light / Dash Display Switch side.

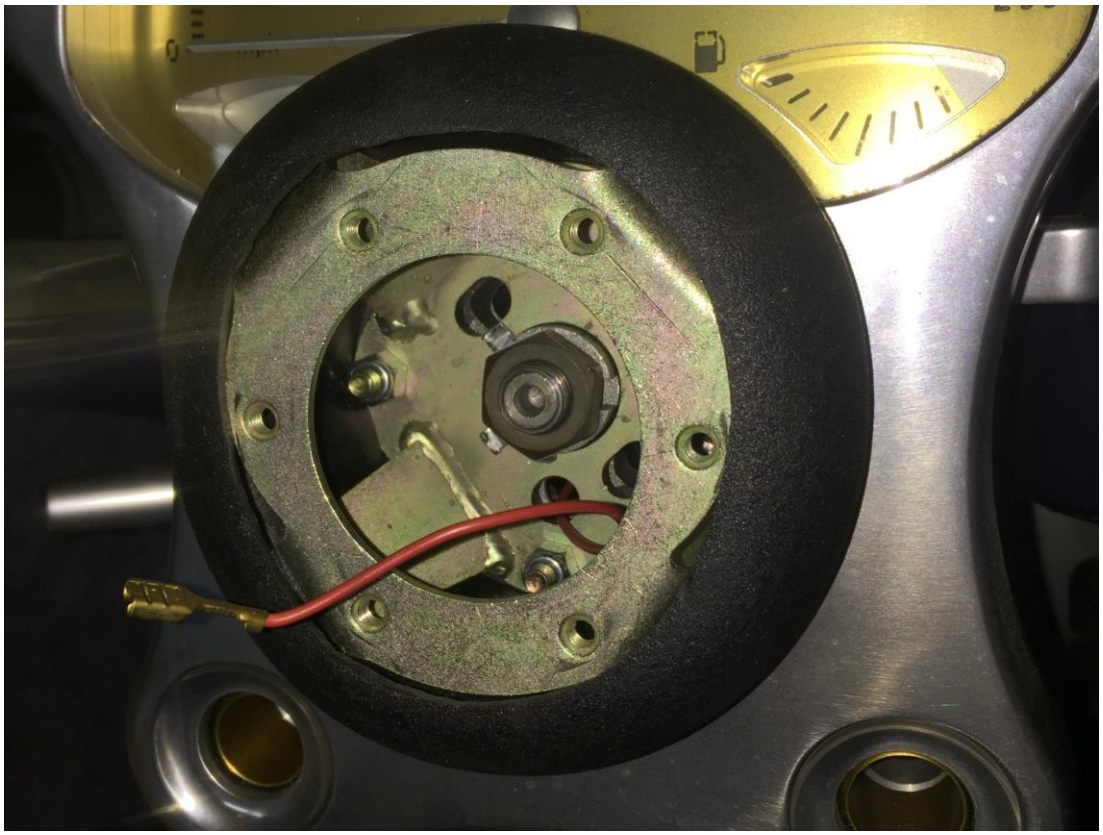
To get enough access to do the job I found I have to create more space for myself to work, so I removed the steering wheel (6x 3mm bolts) and the lower half of the dash too.

Steering Wheel Removal

Undo 6x bolts with 3mm Allen Key

Steering wheel pulls off with zero force. Unplug the horn’s electrical connector (just one live wire).

Steering wheel removed.

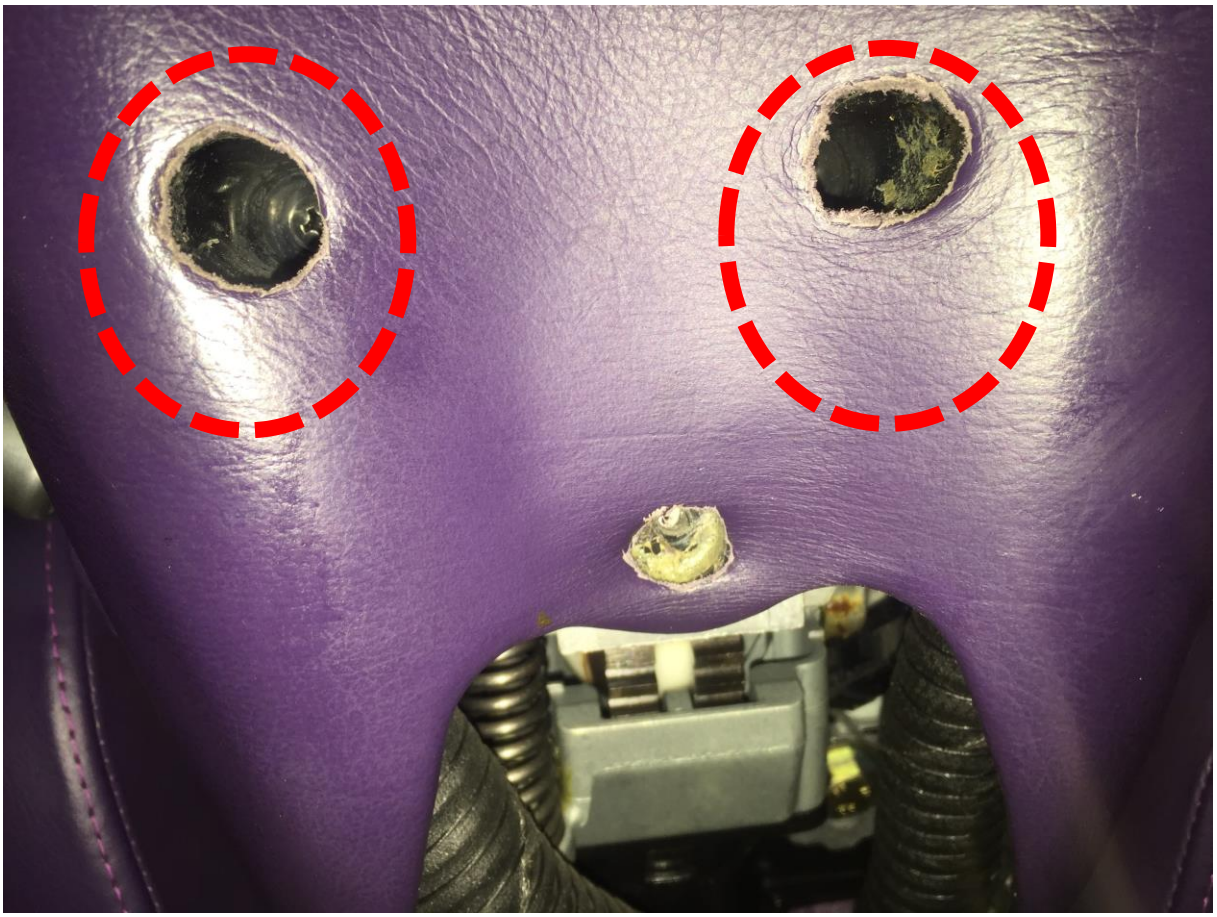


I got carried away and pulled this off too – you don't have to.

Lower dash removal

There are two screws which hold the lower dash on, both medium sized phillips… undo both, then wiggle and wangle the lower cover off. There is an electrical connection for the variable speed wipers that you'll need to disconnect too.

Dash screw locations

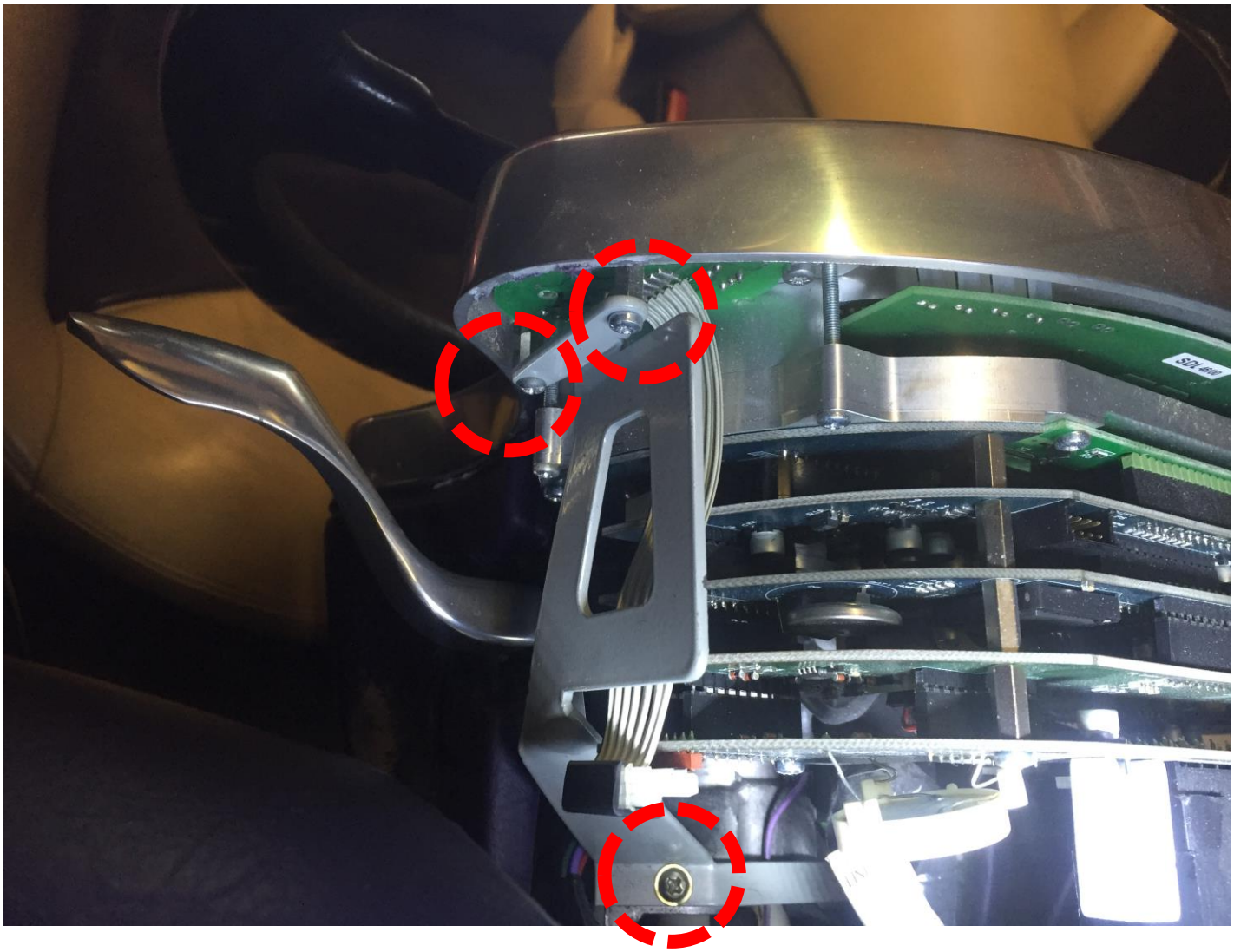


Electrical connector for the windscreen wipers on the lower dash

You should now have lots of room to work and see…

The dash is still held in place by its mount. The mount is connected to the car via two medium sized / brass coloured Philips screws and the dash is held to its mount by four very small silver screws. You need to remove all 6 screws to have enough wiggle room to allow you to remove the switch PCB(s).

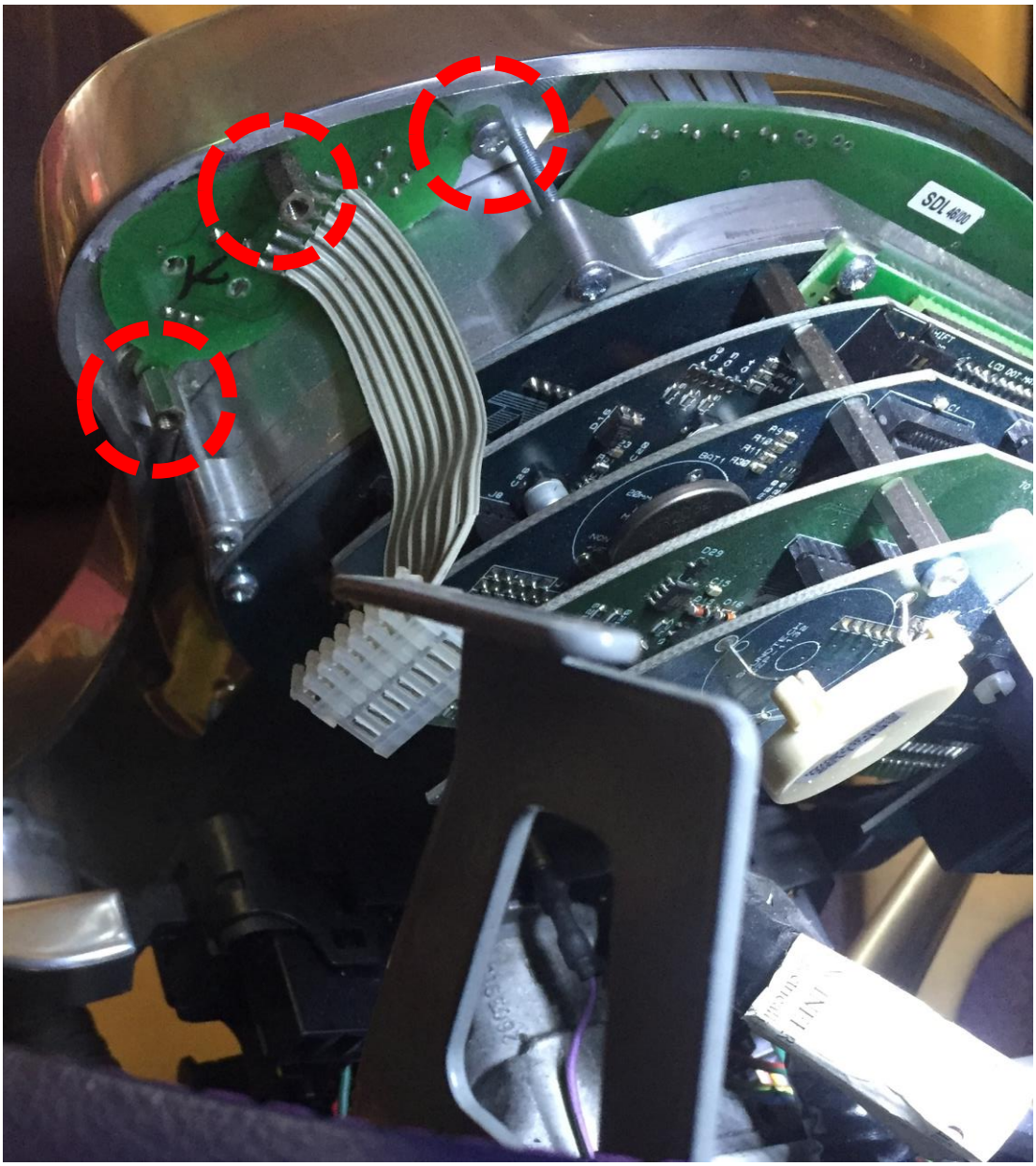
Screws on the right hand side of the car…



Screws on the left hand side of the car…

All 6 screws removed

Now unplug the ribbon cable from the PCB and undo the two bolts and one screw that hold the PCB in place. Note that each one has a washer between the binnacle and the PCB – the screw has a plastic washer and the bolts have metal ones.

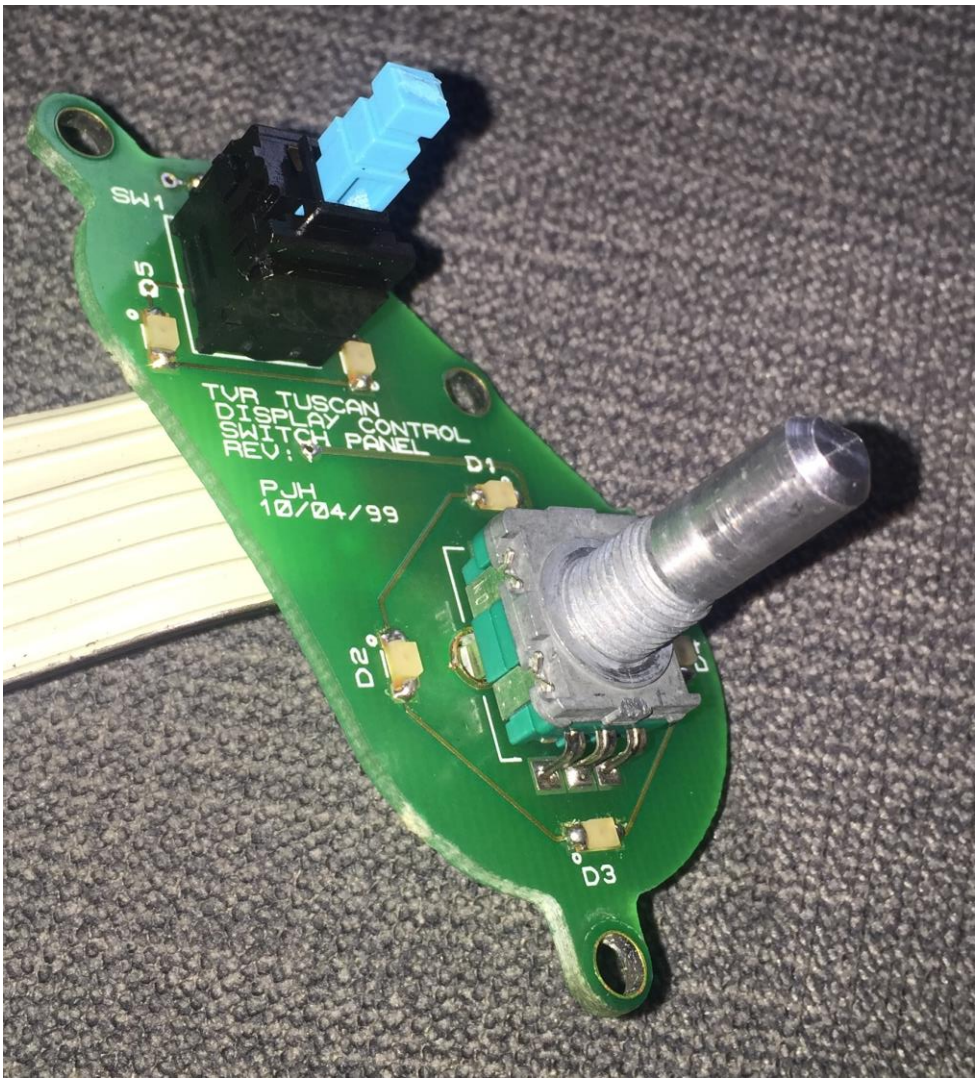


I used a 5mm socket to undo the nuts – they're weren't on tight, just too fiddly for my fingers to grip.

At this point the only thing holding the PCB in place is the gold switch on the front of the binnacle. The knob on the switch is secured to the spindle using a single grub screw that requires a very small (1mm?) Allen Key to undo.

Release the grub screw and pull the knob off the spindle, releasing the PCB for you to remove.

If you dismantle the assembly a little further, you end up with this… The black and blue switch is just an open / close toggle switch that runs the hazard warning lights. The silvery spindle is a '5 pin rotary encoder with switch'.



In my case, I pulled the spindle out of the switch and soaked the whole lot several times with contact cleaner while exercising it. This was enough to get the switch working again ☺ If that doesn't work for you, time to get handy with the soldering iron after you've sourced a replacement switch.

Re-assembly is the reverse of removal, **BUT…**

When you re-attach the gold knob to the spindle, make sure you don't just push the knob on as far as it will go. You need to leave room between the binnacle and the back of the knob to ensure it has room enough to depress for the

button feature to work. I used a couple of bits of cardboard as a shim which gave me about 1-2mm clearance. Test the knob and button work before completing re-assembly.