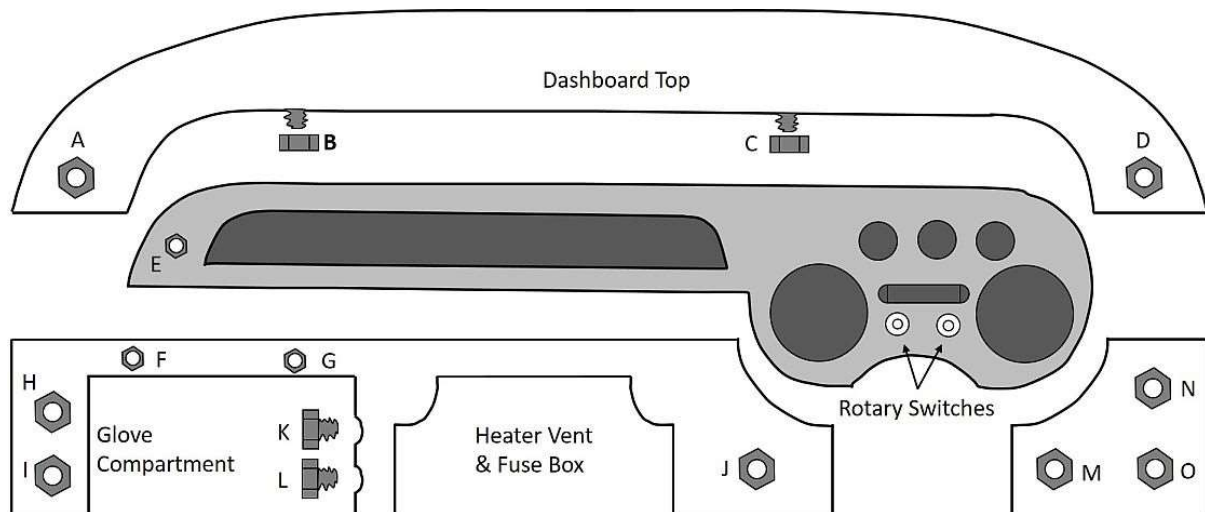


Console and Dashboard (Instruments, Heater and Fusebox)

At some point in a full restoration, it will become necessary to repair or refurbish one or more of the items that are contained in the driver's console. Ideally this would be done only after major structural work has been completed, at a stage when the interior can be kept relatively clean and dust-free, to prevent any ingress of dust into the instruments after refurbishment.



To gain access to the instruments, only the dashboard top must be removed. However visibility and access to retaining nut C is greatly improved if the lower panels are also removed or loosened.

The process starts with removing the lower plastic panel of the steering column (4 long screws) and the right-hand panel of the lower dashboard, which is held by three nuts (M-O) behind the panel. Nut M attaches the panel to a small bracket near the steering column. At this point, nut D can be removed.

Nuts A and B are accessible from the glove compartment, although this first requires removal of the radio, if fitted. The instrument panel can then be loosened by carefully removing nut E and the knurled rings which secure the rotary switches on the front of the panel. The bolt that attaches nut E is glued into the back of the wooden instrument panel and will be loosened if too much force is applied to nut E. If resistance is encountered, use penetrating oil to free nut E or first add a lock nut (or two locked nuts) to stop the bolt rotating.

If access to the heater and its control rods will be required, remove nuts F- J and the lower panel. You will also need to remove the grab handle (two machine screws and nuts) and the fusebox surround (not shown). To access the instruments only, remove nut J and pull this part of lower panel forwards. At this point nut C can be reached with a socket, square drive and a long 20-30cm extension.

The dashboard top should now be loose and is removed by pulling the ends carefully forwards and upwards. Do not use force – the top has a narrow central section where there is a cut-out for a

loudspeaker and it may break. The vinyl of the top may adhere to the windscreen corners over time and, if stuck, can be freed by gentle pressure or by using soft tools to separate them. When refitting, do not overtighten the nuts, to avoid loosening the threads in their panels.

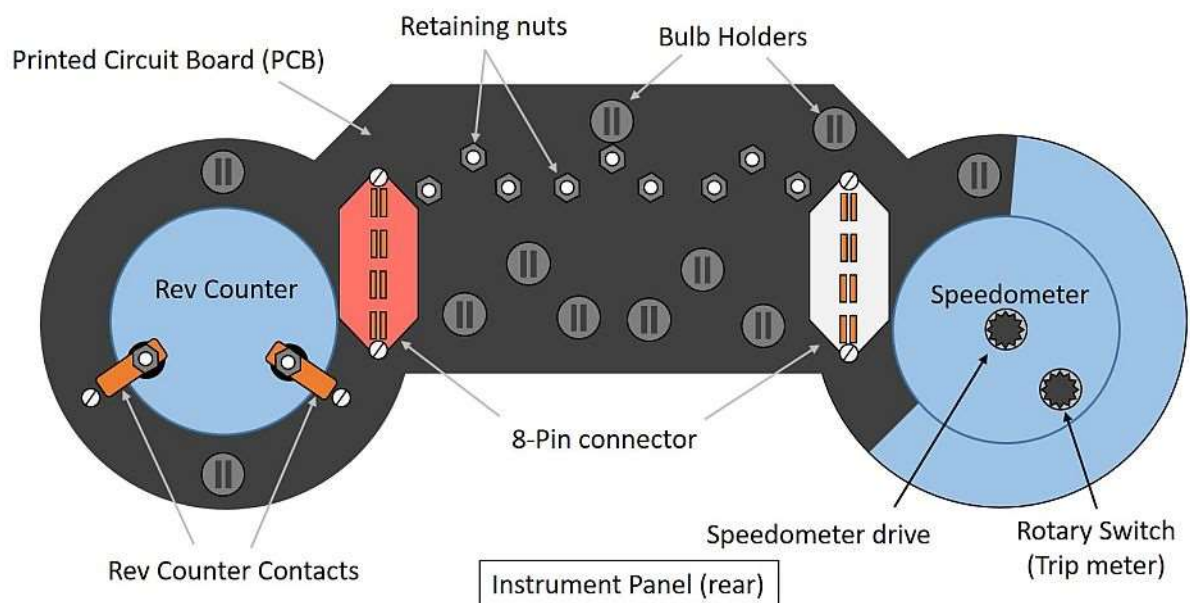
Removal of some of the vinyl-covered, foam-backed panels is also an opportunity to inspect their condition and make repairs. With the passage of time and the effects of heat and sunlight, the foam backing can become brittle and may disintegrate. The first step should be to remove any decayed foam, clean and, if necessary, rustproof and paint the underlying metal, and then stabilise the remaining foam using paint or a suitable spray on coating. Any treatment should first be tested on a small area, in case its solvent causes damage to the surviving foam. Missing areas of foam could be replaced using a rigid, closed-cell foam, carved to the correct shape. While not tested by us, high-density blocks of closed-cell polyethylene (PE) foam, intended for use in camera and flight cases, are available online and may be suitable. Aerosol cans of expanding foam have also been used by others, although there are reports that these cause mess and can distort panels as the foam dries and contracts.

After removal of the dashboard top, unscrewing the knurled rings around the rotary switches allows the wooden fascia to be removed. The fascia sits in a groove formed by the lower panels and, if necessary, these should be loosened or removed first. With the fascia removed, access to the central instrument cluster (speedometer, rev counter, warning lights and gauges) is obtained. Removal of four securing screws, allows the cluster, contained in a light-blue plastic case, to be pulled forward to access the wiring behind. The cluster is attached to its wiring loom by two 8-pin connectors, one white and one red, which are numbered 37 and 42 on the S2 Fulvia Coupe wiring diagram (see Owners Notes 1, Appendix 1). Once these connectors have been separated, the instrument cluster can be extracted and dismantled on the bench.



The Perspex screen is removed from the cluster by using a small screwdriver to gently lift its tabs **from the rear**, after which the mask can be lifted off. These can be cleaned, polished and retouched as necessary.

Electrical problems (intermittent failure of gauges, dim or faulty bulbs etc.) will require further dismantling. The blue instrument cluster is mounted on a black printed circuit board (PCB) which also provides the base for the 8-pin connectors.



Two nuts secure the rev counter to the PCB and another nine small retaining nuts attach it to a pod containing the three gauges (fuel, water and oil). These nuts also mark the points where the instruments make electrical contact with the hidden face of the PCB. Once all of the nuts and six self-tapping screws have been removed, the PCB can be lifted off and inspected.

The bulbs that provide panel illumination use a common PCB circuit which is connected to a potentiometer, operated by one of the dashboard rotary switches. The 12V supply to the potentiometer is controlled by the main lighting switch (Fuse 1, sidelights). While the instrument panel is absent, this potentiometer should also be removed, tested and cleaned.

Bulbs that are used for the warning lights (fuel level warning, handbrake and choke) also share a common +12V ignition-controlled circuit but are earthed separately, through their switches, using individual circuits on the PCB.

The speedometer is purely mechanical, with inputs from two cables that are connected to the gearbox (speed and mileage) and to one of the dashboard rotary switches (trip distance). The rev-counter has two electrical contacts, connected via pins at its rear to circuits of the PCB. One is the common earth, and the other receives a 'chopped' 12V signal from the distributor via a pin on the red connector. Repairs to either of these instruments should probably be left to specialists, although it may be possible to adjust their zero positions by gentle manipulation of the needles.

The PCB and its contacts to the instruments are subject to corrosion and so cleaning with fine emery paper or wire wool is advised. Dirty contacts can cause erratic movement and incorrect calibration

of the gauges and rev counter, as well as poor illumination of the instruments. Particular attention should be given to the areas where the bulbs and gauges make contact with the boards. These contacts are visible as small holes in the PCB in the photographs below.



Before re-installation into the instrument cluster, the circuits and the 8-pin connectors on the rear of the board should be tested for continuity and excessive resistance. It is also important to check the quality of the common earth that is provided to the board by a pin on the white 8-pin connector. This is supplied, via a terminal on the white 8-pin connector, from a lead that can be traced back from the connector, but which is usually attached to the body at nut J (lower dashboard panel fixing). This earth should be checked and cleaned before reassembly.

As a guide for later fault finding, the instrument panel PCB layout and its connections to bulbs, instruments and gauges are shown below and in Appendix XZ.

