

PROJECTS

We don't just write about Porsches, we drive and live with them, too

THE TEAM

STEVE BENNETT



996 C2

With all the mechanicals largely sorted, it's time to do the fiddly, annoying stuff, like finding and banishing rattles. I've peeled back the headlining to trace the worst of them. Wish me luck!

KEITH SEUME



914

A recent trip to Germany in the 914 was fun and trouble free and encouraging given that the car is still very new to me. Of course, there's still much to do to make it 'mine,' including getting the Fuchs fitted.

CHRIS HORTON



924S, 944 LUX

A momentary blip from the 924S, when one day that refused to start – but then the day after that it fired first time. Hey ho... All good on the 944 front, though – dormant for several months, but seemingly raring to go

PETER SIMPSON



356C, 3.4, 2.7, GARAGE

Roof is on and watertight, the lights and sockets are ready to install, then I can start clearing out some projects one by one. First to move in is the VW T25 for an engine swap, then one can go!

BRETT FRASER



BOXSTER 986 3.2S

Despite the weather (sometimes) I've not been driving the Boxster enough in recent times. Blame the fact that I can hear the rear silencer ever-so slightly beginning to give up the ghost.

JOHNNY TIPLER



BOXSTER 986 3.2S

A simple oil change at new to me Porsche specialist, William Hewitt, turned into a much bigger list of jobs. An oil leak was traced and sorted and this new outfit also managed to get the wheels balanced.

JEREMY LAIRD



BOXSTER 987 3.2 S

The Boxster continues to go about its daily duties, with little in the way of fuss. Sure, there's a few age related issues, but nothing to be too concerned about. We'll see what the MOT throws up in November.

TOP END OVERHAUL

After five years with a sticky patch hiding a split in the leathercloth, our man with the air-cooled 911 thought it was time to restore his Targa top. Here's how he did it – lots of practical DIY stuff, he did once work for *Car Mechanics* after all!



PAUL DAVIES

CARRERA 3.2 TARGA

Occupation:

Freelance motoring writer

Previous Porsches:

'68 912

Current Porsches:

1987 Carrera 3.2 Targa

Mods/options:

Just as Stuttgart intended

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This month:

Refurbishing the Targa roof, with a handy and comprehensive kit from Design 911

Some say it's the most unloved of all the 911 models. Certainly during the air-cooled era compared with the tin-top coupe only about one-third lift-off roof panel versions of our (well, mine anyway) favourite Porsche were produced. More scarce they may have been, but they also tended to be less valuable on re-sale – roof line not quite so smooth, wind noise greater, and oh those water leaks!

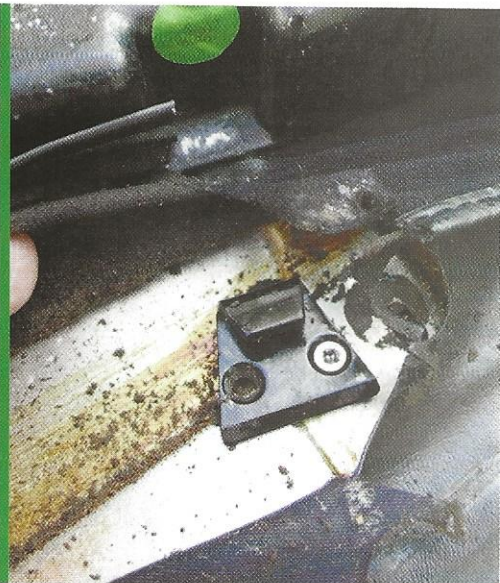
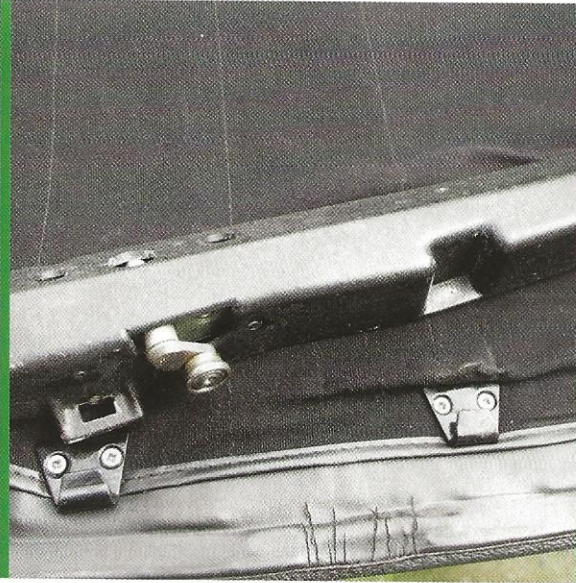
But don't believe all you hear, or read. There is the good side. Removing the Targa bit and folding it into a boot-size package gives the driver and passenger open air motoring without the wind-buffeting torture

of a full convertible, in place it makes the interior as secure as a tin-top, and the 'roll hoop' panel adds safety and rigidity to what is an otherwise floppy body in convertible form.

OK, I admit I bought my Targa because at the time – we're talking 15 years ago now – it was cheaper than a coupe, and also the best available 911 I could afford, whatever the configuration. Since then that top has been on-off-on a million times. It's never leaked, rattled or flown away, and I've grown to love it: also it's pretty cool (as in stylish) I reckon. I'm also pleased to say values appear to have come closer to the hitherto top dog coupe. Perhaps the re-



The infamous patch repair held for five years but the rest of the top was also beginning to look a bit tatty and the headlining was getting very droopy



The lateral window seals are fixed to the frame sides and held in place by self-tapping screws accessed through the holes. The steel 'gutter' is still in place

Front and rear hinged frame parts locate in clips which are bolted to the roof plates and also help keep the leathercloth and headlining in place. This is the front

The clip bolts on the front edge of the frame were rusted to their screw plates and had to be drilled out. Rears were not rusted and came off easily

introduction of a Targa version of the 997/991 current incarnation has helped.

Except, when you get to a certain age things get tatty around the edges. Five years ago I added a – rather neat I do say – patch to a split on the leading edge of the leathercloth, but more recently cracks have started to appear in various other areas. The headlining was drooping somewhat, and the cast alloy perimeter frame was starting to look its age. Fortunately the rubber seals were still up to it, although a bit tired looking.

Replace, refurb, ignore and battle on, or what? Last time I saw a complete replacement top for sale it was somewhat north of £8000. Now I can't find that advert anywhere on the interweb. Talk to a few friendly specialists about taking on a repair job and they tend to kick the can down the road. Dave Nunn of Southbound, the very best Porsche trimmers in the UK and

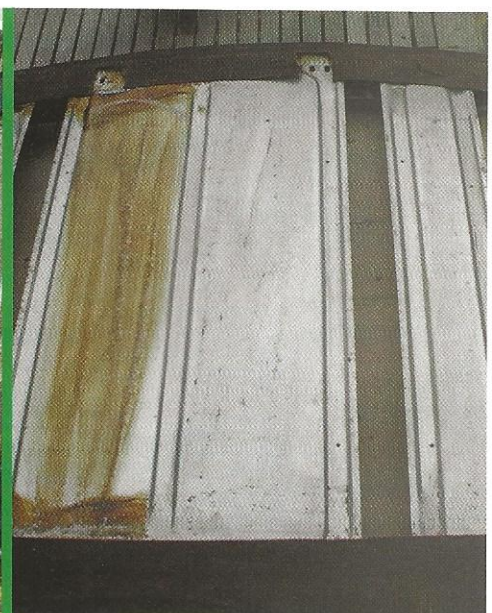
possibly the world, said yes they do re-build Targa tops but don't quote a price until they've got all the bits in pieces. I now know why.

Then salvation. Design 911, purveyors of almost any Porsche part you can ever imagine, supply a four-piece DIY restoration kit. Top quality pre-cut leathercloth roof covering, foam insulation panel, linen lining, and ribbed cloth headlining. All at £346.80 including the dreaded VAT. The Essex outfit also sells several of the bits and seals that may be required. They also have a downloadable set of installation instructions, whilst web-searching (try 'Targa Top restoration') revealed two videos on how to do the job from Lakewell, a Belgian company who appear to sell a kit similar to the Design 911 item.

Do It Yourself it was to be, brave chap that I am. Was I mad? Should I have left it all to Dave Nunn? Read on, dear reader.

First off, a product description. The top consists of a cast aluminium outer frame, the sides rigid and the front and rear jointed to allow folding. When extended the front and rear parts of the frame locate in clips (four front, four rear) to maintain the shape of the top. Onto each side section of the frame is fixed a rubber seal that has a channel into which the raised side window glass fits and a metal strip that (hopefully) acts as a 'gutter' and (more importantly) firmly locates the roof covering left to right.

The aforementioned frame clips are fixed onto five separate longitudinal roof plates that provide rigidity for the roof covering and are linked together by webbing tension straps. The linen lining is glued to the top side of these plates, the gaps between the plates providing the flexibility that allows them to concertina together when the top is removed and placed in the luggage compartment.



Pulling away the old headlining reveals its poor state, and also the accumulation of dirt and old glue. Note also the poor condition of the roof perimeter frame

View underside shows the aluminium stiffening plates and the ribs where the headlining is glued. The old linen lining can be seen between the plates

Roof plates from the top show how the webbing spaces them so the roof will fold. One half has had the old glue scraped off with a soft wire brush

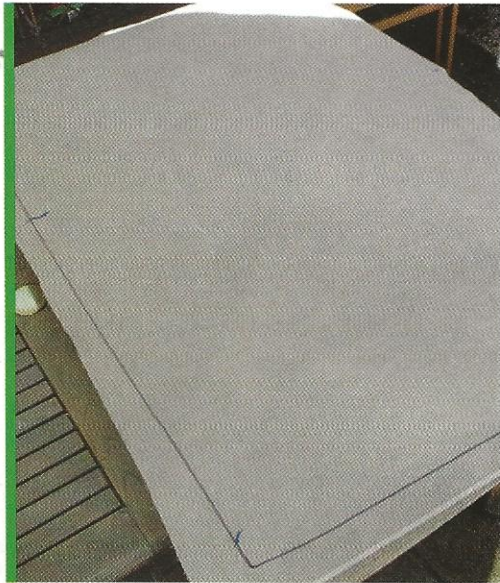
TECH: PROJECTS



Trial fitting showed just how much stretching of the top (assistant needed) was required. Position of the frame locating clips can be marked on the fold-back...



...and with the top off the frame, holes in the leathercloth can be cut for the bolts: wood block underneath, mark with the pipe/mallet, cut out with modelling knife



The linen lining comes with the roof shape marked out. This is centred on the frame and trimmed, leaving sufficient linen to fold over and glue down

A foam insulation panel is glued to the top of the lining and the leathercloth outer cover sits on top of this – stretched to a tight fit, glued in place front and rear and held at the sides by the gutter strips.

The headlining, the fourth item in the kit, is (like the linen lining) glued only to the plates so that it will fold but it is securely fixed front and rear by the frame locating clips.

All the items in the kit (Design 911 will supply new side window seals as an addition to the package at an extra £142) are to highest quality and designed (ho, ho) to replicate the original Porsche parts.

A good look at the instructions plus a few viewings of the Lakewell videos established a few ground rules. A sturdy table plus decent room all around it is a necessity, as is either a) a fan heater, or b) a very hot day. The leathercloth is supplied slightly shorter (about ¼ins in old money) so it must

be stretched to make a tight fit over the frame – fortunately my task coincided with the hottest temperature ever recorded in the UK. You'll need an assistant (thank you, Mrs Davies) for some tasks and also required is upholstery spray glue, a contact adhesive waterproof sealant, and appropriate paint to brighten up the frame. Other tools/stuff any self-respecting car fixer should have to hand.

Take things slowly is the golden rule. With the top off the car look at it carefully, see what goes where, and take loads of pictures. Then start dismantling and put the old bits to one side so you can use them as reference.

As I used to write in *Car Mechanics* magazine the pictures tell the story, here I'll just mention the awkward bits. Thirty-plus years had left my top in a sorry state. Although water never got into the car (honest) it obviously had seeped into the

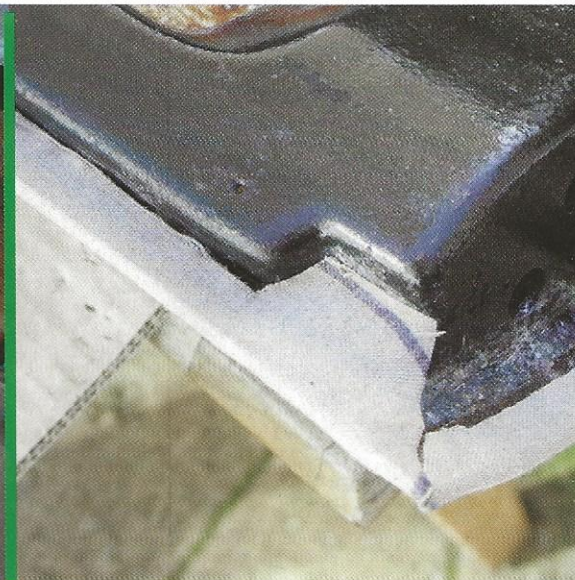
top itself: the front area showed signs of staining, the linen and foam insulation was rotting and crumbling – and the captive plates where the bolts (M4x8) holding the frame clips are located were rusted, and no longer captive.

Removing the frame clips (which were in fine fettle) required drastic action. At the front of the roof the bolts had to be drilled out – which meant cutting through the roof top to get at the plates to hold them firm whilst you drill from the other side. You can't wait until the leathercloth has been removed because the clips are used to hold it in place. Unfortunately you also have to cut holes in the tension strip, so these need to be covered before re-assembly. None of this gets a mention in either the instructions or the video!

New bolts are easily purchased from a good engineering store (16 plus four for luck cost me £3) but the screw plates had



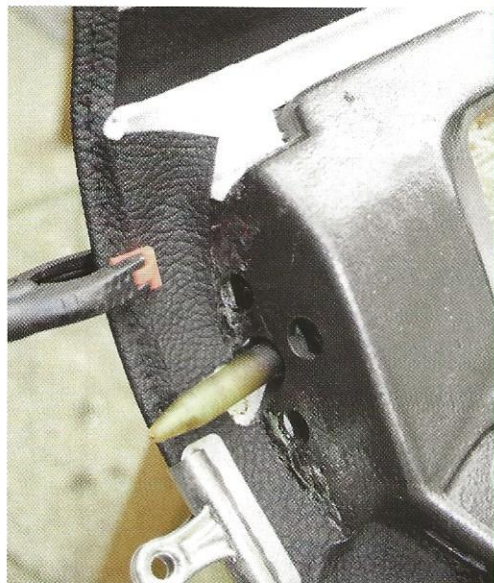
Spray glue is applied to both the aluminium panels and the linen before being stuck down, working from front to back and outwards to get a smooth finish



The linen is tightly folded over and stuck on the reverse side to the plates and webbing with spray glue, making cuts at the corners to get a neat finish



The foam insulation is trimmed fractionally under-size and then stuck to the linen with glue only around the edges to allow flexibility when folding the roof



Once the leathercloth has been stretched over the top it is glued to the underside of the frame. Corner pieces need clamps to keep them in place



The headlining is glued only to the ribs on the underside of the plates, so the remaining areas need to be masked. As the linen, work slowly to avoid wrinkles



The edges of the leathercloth top and the headlining are held in place by the locating clips. The beading of the headlining is also superglued to make a neat edge

to be cleaned up and then, in some way, made 'captive again' – I tried superglue but it didn't work. Fortunately with a bit of a fiddle you can apply pressure through the top layers to hold them in place whilst you fix the frame clips in position. In fact the operation has to be carried out twice – first to secure the stretched leathercloth then the clips have to be removed to fix the headlining before being replaced again. Which makes it all a double fiddle.

With all the old bits removed you can assess the situation before re-assembly. My frame was scratched and slightly corroded, so a (soft) wire brush down was needed followed by a coat of black Hammerite; Porsche I guess used a matt powder coat but that's beyond me. The roof plates were covered in old glue (thinners and wire brush just about got them clean) whilst the side window seals and gutters seemed to be held in place with sealant gunge as much

as self-tapping screws.

These side seals also have separate rubbers at each end – also well gunged up – which have to be carefully removed as replacements are not available, at least I couldn't find any. I reckon a previous owner had had what is known as 'water ingress' problems at some time and gone mad with the sealant; I used a minimum when I re-fitted the seals and gutter, time will tell whether I was right.

Careful re-assembly is the key to a good job. The linen and foam have to be cut to size so the old adage 'measure twice, cut once' applies here. It proved useful to trial fit the leathercloth, holding it in place with bulldog clips, to see how much stretching was required. If your day doesn't include 35deg C temperatures then a fan heater will be needed.

The leathercloth is only glued to the frame where edges have been stretched

over, or is it under? Looking from the side, the beaded edge of the leathercloth needs to be angled downwards to make a good fit against the windscreen frame to cut down wind noise and improve the seal.

Adhesive should be used sparingly as it (upholstery spray especially) easily spreads beyond where it is required. In addition to the spray (for linen, foam and headlining) I used EvoStik to fix the leathercloth to the inside front and rear edges, and Gorilla Gel to hold down the beaded edges of the leathercloth and headlining and the rubber seal ends.

So now (you've been waiting for this) over to the pictures. I'm happy with the result, especially as it saved what could have been a considerable expense if I'd gone wherever the kicked can – see earlier – ended up. If there are any problems further down the line I promise I'll let you know. **PW**

CONTACT

For this Targa refurb kit and just about any other conceivable Porsche part head to Design 911 design911.co.uk



The window seals and gutters are fixed to the frame and the seal ends (tatty, new ones unobtainable) are glued in place and the end plates fitted



Targa top back where it should be! Note neat fitting headlining and the Hammerite re-painted perimeter frame. Now I'm waiting for rain and a good run to see if it leaks



No more patches or cracked edging. It's important to get the beaded edge of the roof covering angled down slightly for a snug fit against the windscreen frame