Q: When is a door not a door?

Antony Hawkins may have a questionable taste in jokes, but he is handy with a jigsaw and has some interesting ideas to improve visibility with weather gear fitted….

A: When it's a jar!

So goes one of the very first jokes I remember hearing. Unfortunately that set the tone for the next forty years, but I digress already…

I have a problem with standard Caterham sidescreens. The soft transparent plastic is prone to scratching and damage if you stow them in the boot (when you find yourself miles from home on an unexpectedly lovely day). I also find that at junctions, roundabout entries and through climbing right-handers, the framework tends to sit directly in my line of sight.

So when, early in 2013, I saw a picture of a Japanese Caterham which had a frameless piece of glazing attached to the top of a half door, with door hinges bolted directly to the glazing, it set me thinking... I decided to make a similar setup for myself, but starting from my standard sidescreens.

My first step was to procure a sheet of 4mm clear polycarbonate. Polycarbonate is used for safety glasses and goggles, helmet visors, riot shields, bullet-resistant glazing, etc, so it's perfect for a sidescreen. It's also fire-resistant, although I hope that I will never need to put this to the test. I sourced mine from www.polycarbonateshop.co.uk but a search will find a variety of suppliers. A 1m square sheet provides plenty to make two SV sidescreens.

Method:

Cut the old plastic "windows" out of the sidescreen using a Stanley knife (fitted with a fresh blade please!) Cut as close as possible to the black fabric, but without touching it. Next, cut the black fabric of the frame itself, both at the rear corner and just back from the front top corner. Note: leave an excess length of the edge piping at both cuts; you can use this to provide a neat finish later. I wish I'd thought of that before cutting...

I left the A-pillar to retain the weather protection between sidescreen and windscreen and because this retains the correct locations for the hinge bolts.

Next, slice the stitching between the two faces of the sidescreen fabric for a couple of inches from both the remaining ends, such that you can fold these back and get in far enough to cut the steel frame away with a hacksaw. You can get the knife in between the two pieces of fabric to cut the stitching - make sure you do this very carefully!

With the top and rear of the steelwork removed, reseal the two faces of the fabric using impact adhesive and stitch the edges back together, including the piping you left spare for this. When stitching, don't try to push the needle through with your thumb - you will get perforated and the needle will bend (guess how I found this out!) Instead, use pliers to hold the needle near the pointed end, push it through and then as soon as you can, pull it through from the other side.

For cutting the polycarbonate, a jigsaw fitted with the finest-toothed blade you can find gives a smooth cut edge that doesn't need much finishing and you can cut tight turns where necessary.

Initially I made just a quarter light panel, drilled to use the four bolt holes that the hinges use, plus the two holes that the mirror was previously attached through (my mirrors are now on IVA mounts but this should work with door mirrors as well). These are all M5 bolts; you will need to replace the old bolts with new ones which are 4mm longer.

This initial setup proved to be surprisingly good. A half door alone probably cuts out about 75% of the cockpit turbulence you normally get with a windscreen but no doors or roof; the quarter light cuts out most of the rest. After an hour of spirited blatting with

Fabric removed.

Steelwork removed.

Quarter light measuring.

Quarter light cut.

Quarter light fitted.

Full window fitted.

my quarter light setup, my face was only just starting to become a bit chilly.

However, back in the workshop (ok, back garden), I then embarked on my Mk II setup - a full sized panel. Well, actually it's a nearly full-sized panel, as a slight miscalculation meant that it's actually a couple of inches shorter than planned on the bottom edge at the rear. Whilst measuring up I also fitted the half hood and allowed about half an inch of overlap at the top.

I drilled two new holes in the metal framework at the (new) top edge of the sidescreen - plenty of care is needed to get these central in the metal strip (that you can't see...), and also to avoid all the swarf disappearing into the sidescreen. To prevent overly stressing the glazing, I used plastic "top hat" washers through oversized holes for all the bolts along the bottom of the polycarbonate.

The end result is a much-improved sidescreen that doesn't deform or scratch anything like as easily when abused, and has no blind spots.

If you use a full hood you may want to be fussier with the dimensions at the rear, but as we only use a half hood it's not critical. If I were to remake the glazing I would also make it a fraction taller towards the rear - at higher speeds there's enough flap in the half hood that the tail end of the glazing sometimes escapes to the outside.

Overall? Well, at no point in the last year have I felt that the factory windows were better in any way, and if I do ever damage the glazing, it's a few quid and half an hour's work to replace the panel, rather than the cost of a whole new side screen. To me, it's been a most worthwhile improvement. ***LF***