

Crackers Cockpit Seat Part 1.

Introduction:

Cracker as purchased had some very good tilting and sliding seats but unfortunately, having spread out a bit as we got older, neither of us found them very comfortable. Looking at various seat options none appealed so I decided to make my own cockpit seats. When I say 'make my own' I'm exaggerating a bit, what I did was to prepare some seat backing boards for the local coach trimmer to finish them off.

Note.

My definition of 'Cockpit' seats is where there is a combined backrest and separate seat cushions. These are not securely bolted down and can be easily removed.

The seat is retained in position by the occupant, who is retained in position by the seatbelts. It would require quite an elaborate mechanism to allow for cockpit seats to be adjustable fore and aft so they are normally fixed in a permanent position to suit an individual driver. It is fairly easy to allow for adjustment to the angle of the seat backrest.

In my opinion the biggest disadvantages of a cockpit seat is that the passenger has to accept the same seat backrest angle as the driver, second the passenger will often need some form of footrest to cater for the lack of fore and aft adjustment of the seat.

Preparing the baseboards:

The best material for the baseboards is plywood and the best plywood is Birch. Unfortunately Birch is very expensive and heavy. A good alternative is Spruce plywood which is lightweight, strong, water resistant and considerably cheaper than Birch plywood. £75 procured an 8' x 4' x 18mm thick sheet, which is enough to make two complete seats. I purchased the plywood a couple of years ago and used just under half of it to make the cockpit seat for Mungo my Lomax 224. With the purchase of Cracker the remaining half sheet now found a new home.

With the choice of backing board selected I measured the seat angle in the family car and set an off-cut of wood at the same angle in the rear of the TC's cockpit, this gave me the height of the seat backrest board. The next job was to measure the maximum cockpit width to get the second dimension. The board was now cut out as an oblong on the table saw.

The board now needed shaping so after applying a vertical centreline to the board I measured the cockpit width at various heights and transferred these measurements onto the board, measuring out equally from the vertical centre line. The sides of the backboard were then profiled with a jigsaw.

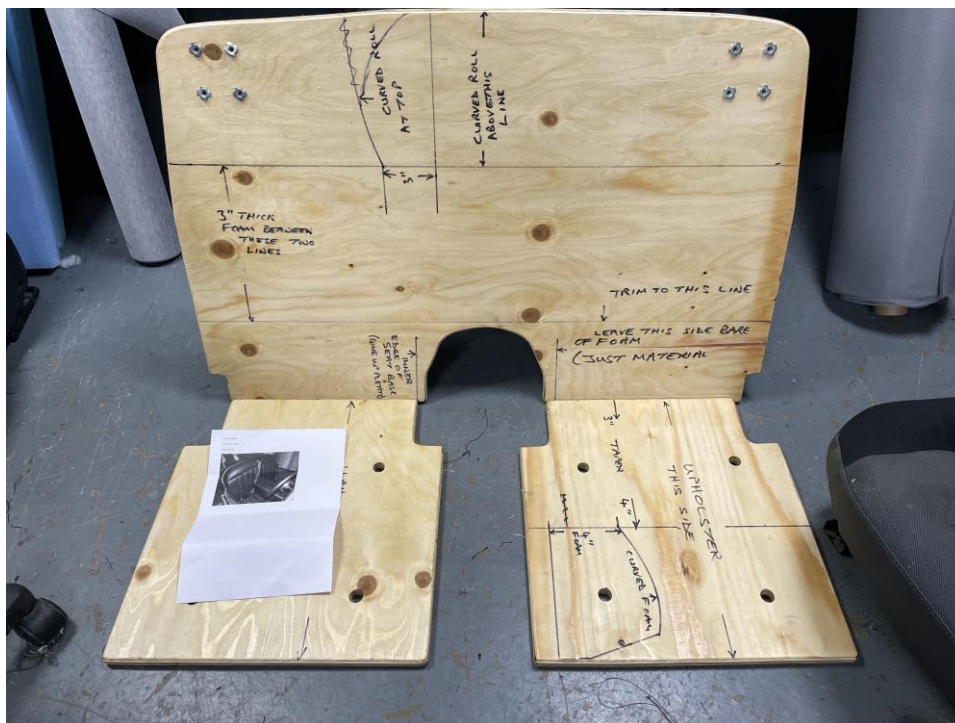
With the backrest set in the car at the correct angle I marked out the recess for the transmission tunnel, making it slightly oversize to allow for a padded transmission cover to be fitted. With the backboard again located in the car at the correct angle I scribed the profile of the rear cockpit edge onto the backboard. The final height of the upholstered backboard should be set so that it does not affect the fitment of the tonneau cover.

One irritating problem with Crackers original seat fitment was the lack of seat belt guides at their upper outer position. The original owner had gone partway towards curing this by making up a forward luggage cover which had primitive seat belt guides in the top outer corners. Unfortunately this meant that gaining access to the luggage compartment required the removal of two wing nuts before removing the luggage cover complete, then fiddling the seat belts over the guides when replacing the cover. My first access to the luggage area of Cracker resulted in the combined luggage area cover and seat belt guide being removed and permanently discarded. The new cockpit seat backrest acts as the luggage area cover and the problem of seat belt position is rectified by having bespoke (homemade) guide brackets bolted to the top outer edges of the

seat backrest board. After making a template for the seat belt guides I drilled the mounting holes in the seat back board and fitted captive nuts for stainless steel M6 fittings.

With the general shape of the backrest board finalised I fettled all the edges and chamfered them with a router. The instructions for the trimmer were then written on the backboard with a felt tip pen following which the board was protected with two coats of 'No Nonsense Yacht Varnish' from Screwfix, brilliant stuff and looks a bit like fibreglass resin.

The next job was to shape and cut out the seat baseboards. I took my main fore and aft dimension from the original seats allowing cut-outs for the seat belts at either side. The dimensions for the upholstery were also taken from the original seats and again written on the boards in felt tip pen before being varnished.



The seat boards ready for the upholsterer to work his magic.

The inset paperwork shows a photo of the seats in Kermit my Aero Merlin which influenced the general upholstery design.

Making the upper seat belt guides:

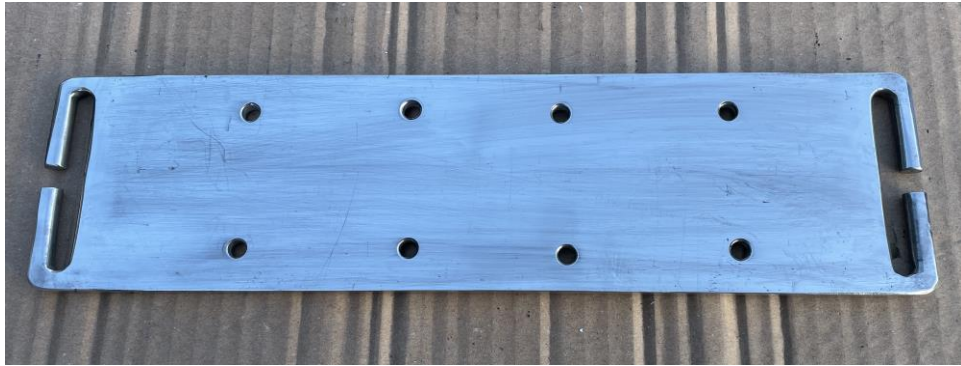
I decided to make the seat belt guides out of a piece of aluminium strip 3" wide x 12" long x 1/4 inch thick (it cost £9.15 from eBay) drilled, cut and filed etc. to shape. This was a lot of work which could easily be carried out on a milling machine, but unfortunately I don't have one. The photos should be self explanatory.



Corner holes drilled to mark edges of seatbelt slot.



The seatbelt slots formed.



Mounting holes drilled.

After polishing the seat belt guide plate it will be cut in half. At this stage I took the backing boards to the upholsterer and agreed a quote of £500 plus VAT for trimming in best quality faux leather, which is guaranteed for as long as I own the car.

To be continued.