

B05

LOMAX DOOR CONVERSION

From: Vic Braybrook

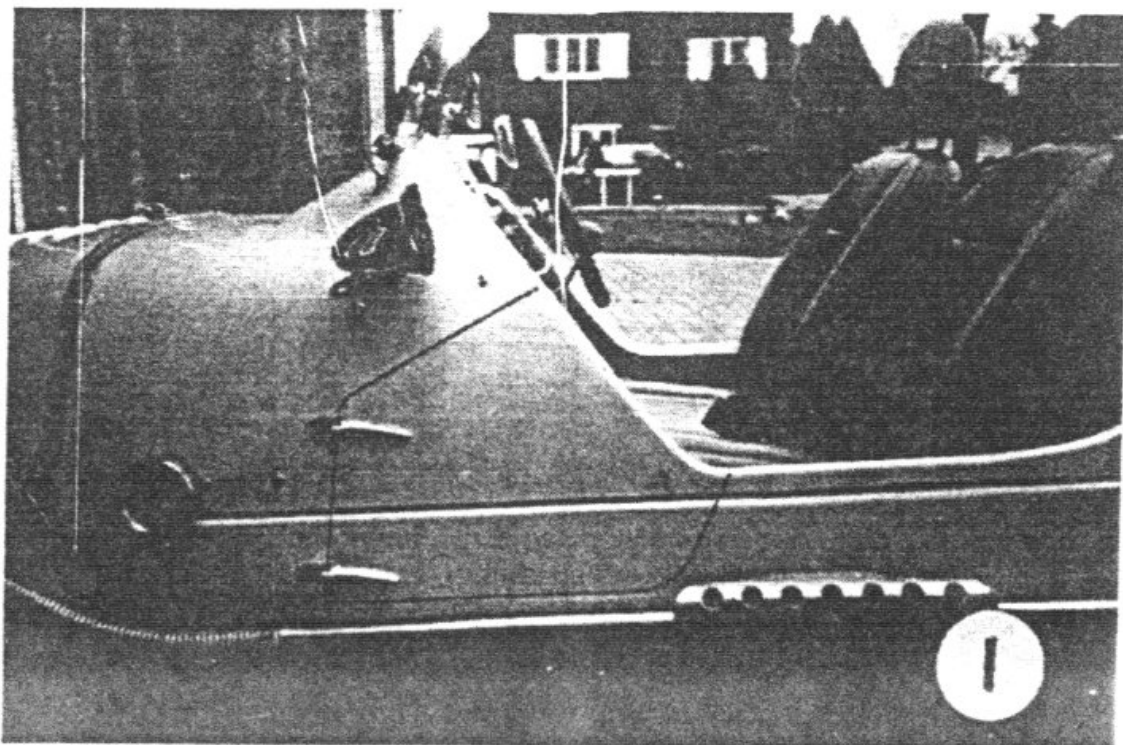
I had decided to put a passenger door on my Lomax, but was concerned that cutting the door out of the body would cause distortion and therefore misalignment between the resulting door and body opening. I had heard that members who had cut a boot opening in the beetle back had come across this problem, I assume caused by stresses in the moulding being released.

To combat this, I built the basic frame for the door and body opening on the body before jigsawing the door out. In my case it proved successful. Before you start, I suggest you purchase the hinges, latch and any trim in case you need to do slight changes to the following directions, I would also suggest you read through the whole article first.

Decide what sized door is required and mark the outline onto the outside of the body, together with lines approximately a 1/16th inch on either side of the outline. These extra lines will help as a guide later on.

1. THINGS TO CONSIDER

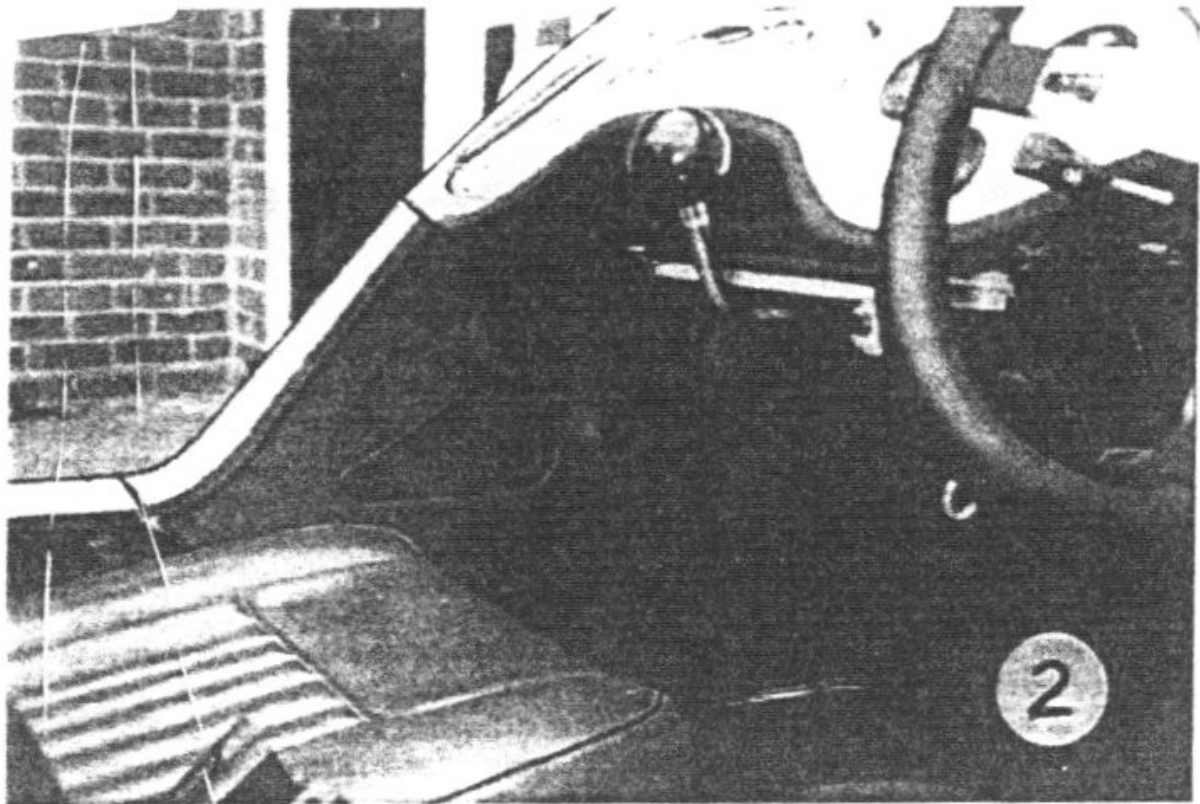
- a) The forward door edge depends on where the tubular scuttle and its mounting flanges are and needs to be 1 1/2 inches from them. I decided to run the edge parallel with the rear edge of the bonnet. (See photo 1) This does however make the hinges lie at a slight angle, so you may want to make it vertical.
- b) The top of the door, I started at the bottom of the dash. (See photo 2).
- c) The bottom of the door I made to just clear my high level exhaust pipe. Since the photo was taken I have extended the exhaust guard. Obviously if you have a lower exhaust system, the door can be made deeper but I would suggest leaving at least 1 1/2 inches above floor level.
- d) The rear edge position depend on you own seats and preference.
- e) The radius in any corner needs to be large enough for a jigsaw to follow going through approximately 7/8ths inch thickness. The minimum radius I used was 1 1/4 inch.



Transfer the outline onto the inside of the body (1/32 nd diameter holes drilled at the ends of the straight lines may help)

2. Decide on what width frame you require, I allowed 1 1/2 inch either side of the door opening, except for the rear part, which are made wider to suit the fixing of the latch. in my case the lower edge of the floor opening was some distance from the floor, so for strength I extended the ends of the frame to the floor.
3. On the inside, draw the outline of the frame either side of the cutting line. In between these lines and to approximately 1/2 inch outside of them, remove any major bumps, then clean and rough up the surface to ensure good adhesion to the frame. You will have to reapply the outline to help position the frame.
4. Cover scuttle frame, fixing nuts and bolts with tape to prevent any resin running into them.
5. There is a styling line that runs along the side of the body. On the inside, the area beneath this line needs to be brought out to the same level as the upper surface for the length of the frame. In my case I used 3/16ths exterior grade ply. To try and get better adhesion against the inside of the body I used glass fibre tissue and a liberal amount of resin between the body and ply. I held the ply in position by using stout garden canes wedged in position from the other side of the cockpit, so it followed the curve of the body. When hardened, I used a Surform to ensure both surfaces were level.
6. Build up the main frame using 1/8th thick exterior grade ply. Cut the ply to match the outline of the frame drawn on the inside of the body. I used 4 layers and in the corners I overlapped the alternate strips for strength. Fix one layer at a time to the body again using canes to hold in position. For the first layer above the styling line, I again used glass fibre tissue and a liberal amount of resin between the body and ply. I used just resin between the other layers. The frame should now be approximately 3/4 inch thick. Cover all the frame with a layer of glass fibre mat and resin, overlapping onto the body by approximately 1/2 inch. Try to make a neat job of this and allow to harden.
7. On the outside of the body put masking tape on the surface either side of the cutting line to ensure the base of the jigsaw does not damage the body. I failed to do this and made a few slight marks
8. Double check you are happy with everything and with fingers crossed (with legs really because you want to guide the jigsaw carefully!). To start the cut I use a hacksaw to get through the wide flanges on the cockpit opening. Now jigsaw around the door outline. I used a medium cut blade for wood. Try to keep the blade at 90 degs. to the surface. Get help to support the door as the final part is cut through.
9. Trim around the door and opening with a Surform or file to give approximately 1/8 inch gap using the previous drawn lines as a guide. I found it was at this stage that chipping to the gel coat could occur, but to reduce the risk I suggest a) The cutting stroke of any tool to go from the outside of the body to the inside so the gel coat has a support of its backing and on the return stroke lift the tool away from the surface. b) Put a small 45 deg chamfer on the outside edge of the door opening.
10. When satisfied with the gap, put approximately 1/16th inch radius round the door and opening to again reduce the chance of chipping of the gel coat. Coat resulting bare surfaces with resin and apply one layer of tissue glass fibre, just sufficient for the tissue to disappear. Try to make a neat job of this.
11. Now fit the hinges. I used chrome vintage hinges, (code no. BVH) from **Europa**. (Address and phone no. are in the Handbook). They cost £27 a pair, but are available at some kit car shows for approximately £18.
12. Fit the latch, which will mean cutting into the door frame. Choose as thin a latch as practical. I bought mine from an Autojumble, but I believe Europa have a suitable one. The striker plate I made from stainless steel.

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13. I used a piece of inner & outer cable attached to the latch and door frame to open it, similar to the old Mini's (see fig 1).

14. Cut a spacer out of the exterior grade ply for the door opening (see fig. 1 & 2) following the outline of the frame, this wants to be slightly thicker than the wall of the edge trim that will go around the opening.

15. Cut another piece of exterior grade ply or aluminium, thickness to suit the edge trim. Again following the outline of the frame, but extending into the opening enough to take the edge trim. Any corner must have a radius big enough for the edge trim to follow. I painted the trim panel with resin and when hard covered it with vinyl upholstery material using Evostick. Put the edge trim on the panel and then align the panel with the opening and secure to the frame.

16. To get the outline for the door trim panel, create a template by securing a piece of stiff paper or card to cover the whole door frame, making sure it follows inside the top flange of the door. Close the door and trace a line about an 1/8th inch away from the body opening outline created by the edge trim. Transfer this onto 1/8th ply. Cut around the outline and also cut an aperture for access to the latch cable. Hold this panel against the door frame and close it to ensure it clears the edge trim. I painted it with resin and covered it with upholstery material using Evostick.

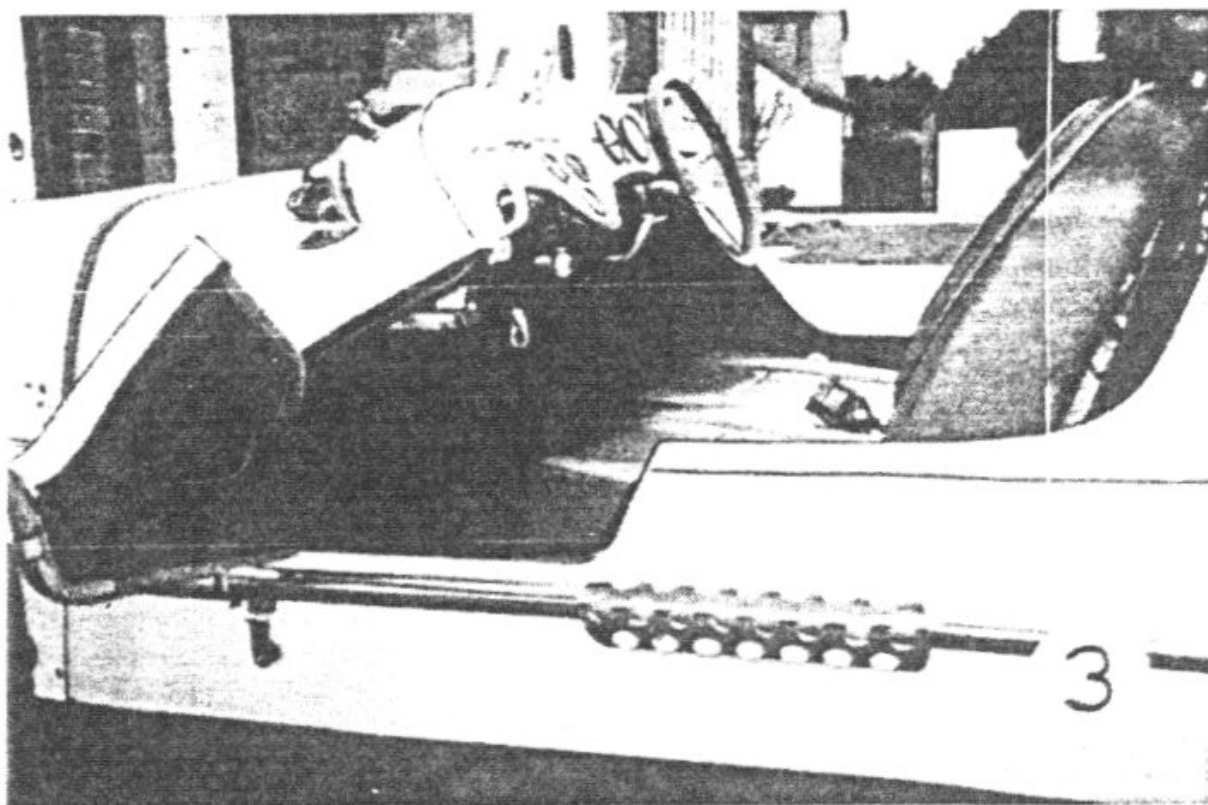
Close the door and position the door trim panel onto its frame ensuring there is an equal gap all around between it and the body opening. Secure to the door frame. I didn't paint the glass fibre and resin covered frames because I thought it looked in keeping with the car to see the layers of ply.

Use a mask when cutting or drilling glass fibre and use the resin in well ventilated areas. I also used gloves. *(I thorough endorse Vic's recommendation of gloves as resin is an absolute blighter to get off your hands and will actually BOND to your nails! Ed.)* I also suggest this modification is carried out during dry warm weather. I did mine in October and had problems with the resin curing on certain days. (It's not a good idea to apply direct heat).

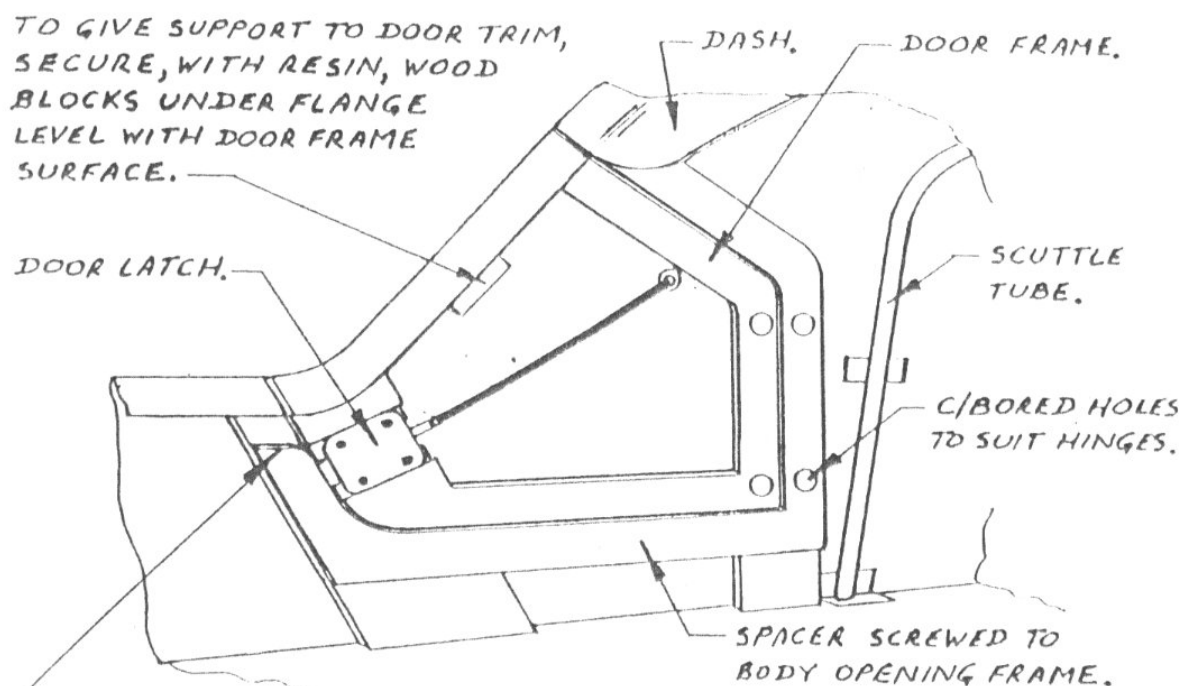
It took a surprisingly long time to do this modification, but given my situation it was worth it. At the time of writing the car has travelled over 4,000 miles to various event including a 16 day holiday to the French Rally. The door has been fine.

This article was written in response to enquiries into how the door was achieved and it is the responsibility of the individual whether follow this procedure.

Vic Braybrook.



TO GIVE SUPPORT TO DOOR TRIM,
SECURE, WITH RESIN, WOOD
BLOCKS UNDER FLANGE
LEVEL WITH DOOR FRAME
SURFACE.



THE END OF THE EDGE TRIM CAN BE BENT
UNDER THE COCKPIT FLANGE (SEE PHOTO N°2).
CUT THE END OF THE SPACER TO CLEAR EDGE TRIM.

FIG. 1

EXISTING BODY.

STYLING LINE.
RELATION BETWEEN
THIS & DOOR DEPENDS
ON DEPTH OF DOOR.

GLASS FIBRE TISSUE
(APPLIED AFTER JIGSAWING).

LAYER OF PLY TO
BRING THE INSIDE BODY
SURFACE BELOW THE
STYLING LINE LEVEL
WITH THAT ABOVE
THE LINE.

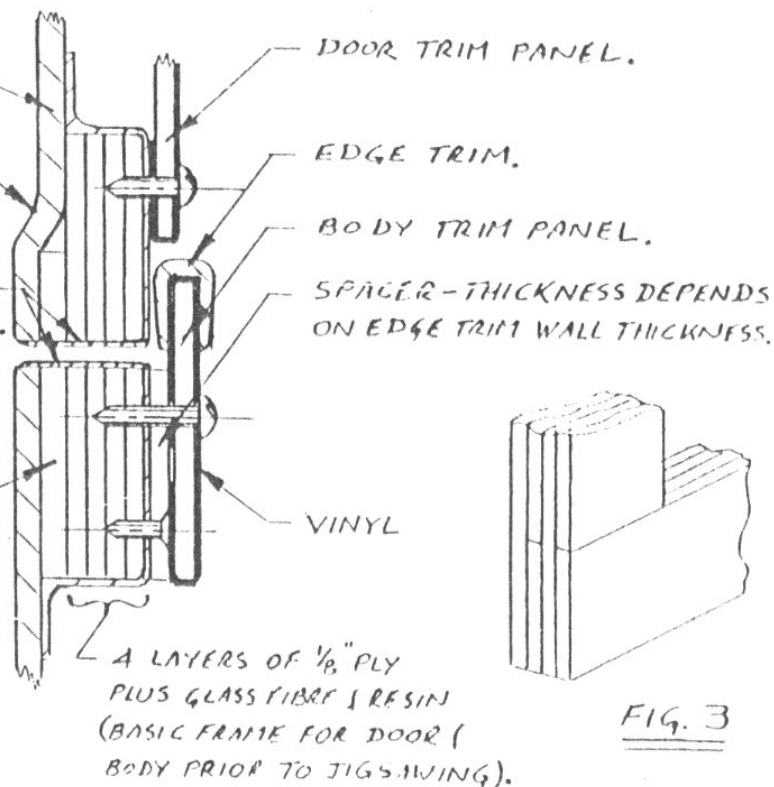


FIG. 2

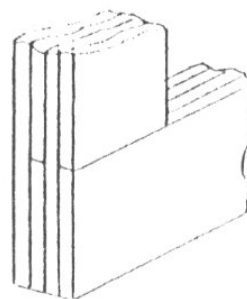


FIG. 3