



*Bristol Austin Seven Club*

Bristol Austin 7 Club - technical article

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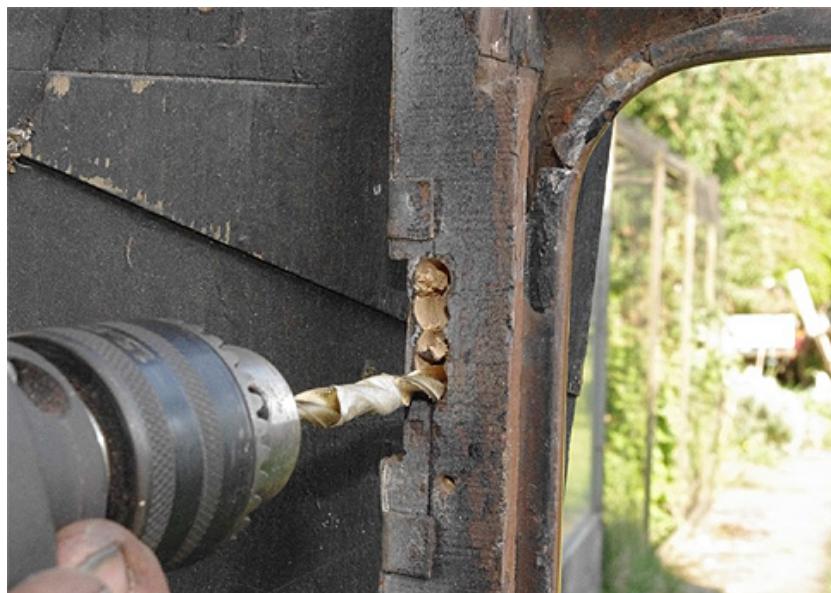
The majority of these tips have appeared in club newsletters over the years. Please note that you use them at your own risk as neither the Bristol Austin 7 Club nor the authors can be responsible for the results of trying to follow the instructions given.

### Solutions to door problems - by Steve Barker

I have started restoring the RN saloon which needs some radical work after thirty years of ownership. When I was given her I was asked to just enjoy her as she was and not to restore her. Well, I had to put in a new floor-pan as nothing existed behind the front seats and I also gave her a blast over spray job years back with several cellulose colours mixed together and she has been known since then as the "Orange Box", but apart from keeping the mechanicals in good fettle I've done nothing more to the body ... and it shows! As she is the second oldest long wheelbase saloon she deserves better.

Two problems relating to both doors have been at the back of my mind while I have been busy resetting the body and refurbishing the engine compartment. The first of which was how to deal with vertical splits at the door bottoms. On the driver's side there were three, two of half an inch each and the worst one (where the door had collided with the wing in the past) of about two inches. As I no longer have my oxy-acetylene and being very wary of welding distortion I opted for making a simple backing plate complete with the panel return under the bottom door frame for each split, overlapping the damaged areas by two inches either side and using JB Weld I clamped them inside the door for 24 hours. The result is very strong and unobtrusive. It is essential to ensure you have clean, bare metal to work with when using this method.

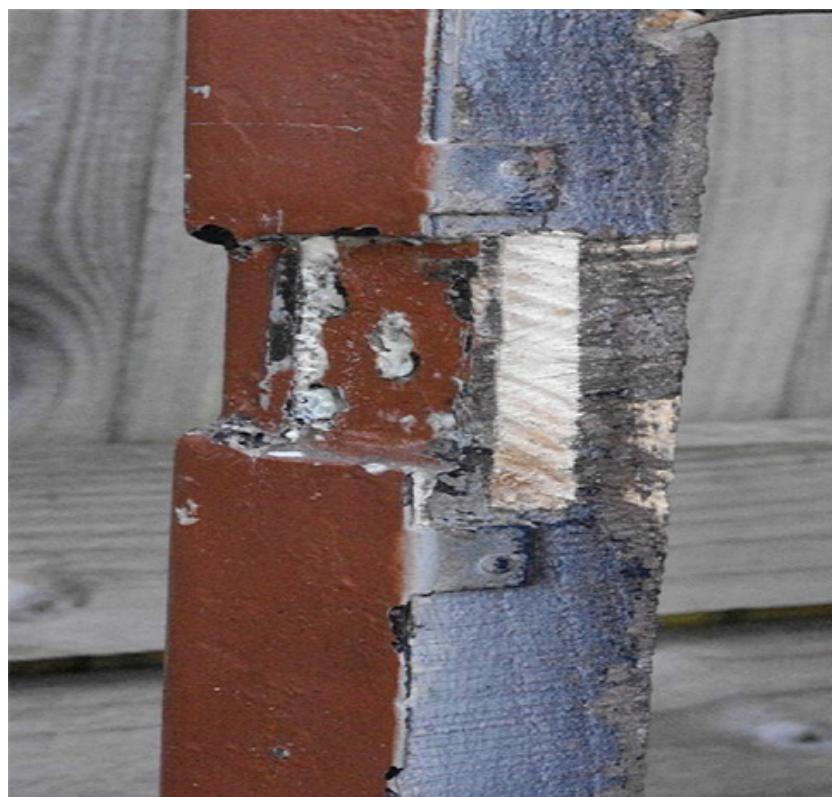
The second problem, bad hinge screw holes, has caused much tea drinking, head scratching and sleepless nights but the solution I hit upon is very simple. All six hinges had oversized screws and two of the hinges had extra holes drilled in them. All of them were at the end of life stage and I was beginning to think I would have to reframe the door which is a long and tedious business (but rewarding once finished!). I resorted to a slightly larger screw on the passenger side top hinge on one occasion as none held and screwed into the door glass which cracked. Since then it has been relying on a 2BA nut and bolt!



I digress ... the answer is to cut a blind mortise behind each hinge point in the door frame and to make and glue in a tenon. It is important to use a suitable hard wood for the tenon for which I used ash (beech is also good but don't use oak as it will rapidly eat any screw other than stainless!). To make the mortise you must mark a vertical line for the centre of your drill holes on the inboard side of the frame so that there is about 2mm of frame left to show the original screw holes when using an 8mm wood drill. Make the mortise length overlap the hinge width for additional strength. The 8mm drill size is the largest useable on an RN frame without breaking into the door glass channel. To make the mortise



you must drill a succession of holes on your marked line so that each overlaps the last by about 1mm and accurate drilling is a must; remember it's a blind mortise (it doesn't go full depth) so put a piece of masking tape on the drill bit to give you the depth. Once you have drilled the length of holes you clean the inside of the mortise with very sharp chisels (a sharp chisel will hand push so no mallets please!). I used a  $\frac{1}{2}$  inch chisel at 45 degrees to clean the sides initially, then cleaned the bottom of the mortise with a  $\frac{1}{4}$  inch. Do not lever against the long sides of the mortise whilst cleaning out or you will break out the remaining frame. All you need to do now is make an accurate hard wood tenon and glue it



in place. There are various excellent modern adhesives available but I use one with expanding properties to take up any slight inaccuracies. It is also wise to put a tiny groove in the side of the tenon so that you are not fighting against the hydraulic effect when inserting it.

Do check before you begin for any old, snapped off screws. If you find one drill carefully as above so that the drill just misses it on either side then carefully clean the wood away either side of the screw (work away from the screw) and you should be able to fiddle the broken bit out. Job done, but don't forget to use smaller sized screws when you fit the door.