

Austin Healey Roadster Windshield Post Repair

Courtesy Michael Salter

The windshield frame on the pre-1963 Healeys is secured to the windshield posts with four 10/24 chromed Phillips head steel screws.



The Red Part is the Post

If the windshield has been fitted to a car that has been winter driven in areas where road salt is used it is very unlikely that you will be able to remove the screws without at least some of them breaking off. I have never had much luck removing steel threaded fasteners from aluminium when corrosion of this type has occurred. It seems that the aluminum forms aluminium oxide which swells into the space between the steel and the aluminum and jams the fastener completely. Heating usually works when you have a steel in steel situation but it is seldom successful when aluminium is involved. Try as you may the end result is usually something like this:



A Typical Broken Off Screw

This presents a serious problem. These screws are right in front of your eyes when seated in the car and any type of repair which alters their installed appearance becomes very obvious.

One option is to drill and tap a new hole either just above or just below the broken off screw and then drill a new mounting hole in the windshield frame to suit, easy, practical but UGLY!!

For many years we seemed to have enough spare windshield posts from which we had managed to remove all the screws to just fit a replacement, unfortunately, those days are long gone and now we have to resort to a repair.

I have tried to very carefully drill out the steel screw with progressively larger drills until, hopefully, the root diameter of the screw is reached, with the drill right on center, and the thread can be pulled out like a spring. This just doesn't work. Even if you manage to get to the correct diameter on center when you try to pull out the remaining thread it is very brittle and will not come out. Usually you don't even get to that point before breaking off a drill bit inside the screw as the drill breaks through the bottom of it.

After many attempts I finally came up with what has proved to be a satisfactory if somewhat labour intensive method of saving the day!! this takes patience and a steady hand but, with windshield posts becoming harder and harder to find, it is worth the trouble.

You start by drilling small (1/16" dia) holes around the entire perimeter of the broken off screw to a depth of about 5/8 ". Try to avoid drilling right through and definitely avoid breaking off drill bits as you do this.



You Can Get About 8 Small Holes Around the Broken Off Screw

Once they are all drilled use a slightly larger bit to increase the size of the holes until they start to run into each other. Again proceed carefully and be careful not to break off any drill bits.



Enlarged Holes Will Start to Run Into Each Other

Once this stage has been reached use a small pin punch to tap the broken off screw sideways back and forth until it becomes loose in the hole and can be lifted out with needle nose pliers.



A Little Patience and The Broken Screw Can Be Removed

Once this is done you need to find a flanged 10/18 Rivnut. These are usually used to install a threaded nut into sheet metal and are available at most good hardware stores.



A Flanged 10/18 Rivnut. (This one as a 10/18 screw in it.)

The outside diameter of the flange on these is usually about 7/16". This is too big for our purposes so I usually mount one in my drill press on a piece of threaded bolt and with the drill press running run a file on the edge of the flange to decrease its diameter to almost nothing resulting in a flange of just under 5/16" outside diameter. At this stage I often

roughen up the outside of the Rivnut barrel to assist with adhesion of J B Weld used in the next stage.



Rivnut Drill Ready for Filing Down

Once I'm happy with this I drill out the ragged hole in the windshield post to 5/16" diameter.



Done correctly this will leave just a thin wall of post on either side of the hole. Next slide the Rivnut, flange first, into the hole.



The Flange Has to be Small Enough To Fit Into The 5/16" Hole

The hole has to be deep enough to entirely accommodate the modified Rivenut.



When The Hole is Deep Enough The Top of The Rivnut Will be Flush With The Post Surface

The next part is easy. Remove the Rivnut and mix up a small batch of J B Weld and put a little into the hole taking care to ensure that it coats the sides and the bottom.

Smear a little grease on a long 10/18 screw and thread it into the modified Rivnut, be careful to ensure that no grease remains on the outside surfaces of the Rivnut (The ones your roughened up).

Smear J B Weld on the outside and bottom of the Rivnut and push it into the hole then, using a small screwdriver as a spatula, squeeze as much J B Weld into the hole around the Rivnut as you can get in.

As a precaution, to ensure correct positioning, you can install the side section of the windshield frame at this stage but make sure you put a smear of grease on the surface where it will contact the J B Weld.

A few hours later, after the J B Weld has hardened, you can use a file to remove any excess adhesive. The J B Weld is an excellent surface for painting and, if you have been careful not to break through the wall of the post, you can even get away with polishing the post and nothing of your repair will show.