

## Windscreen removal, maintenance and installation

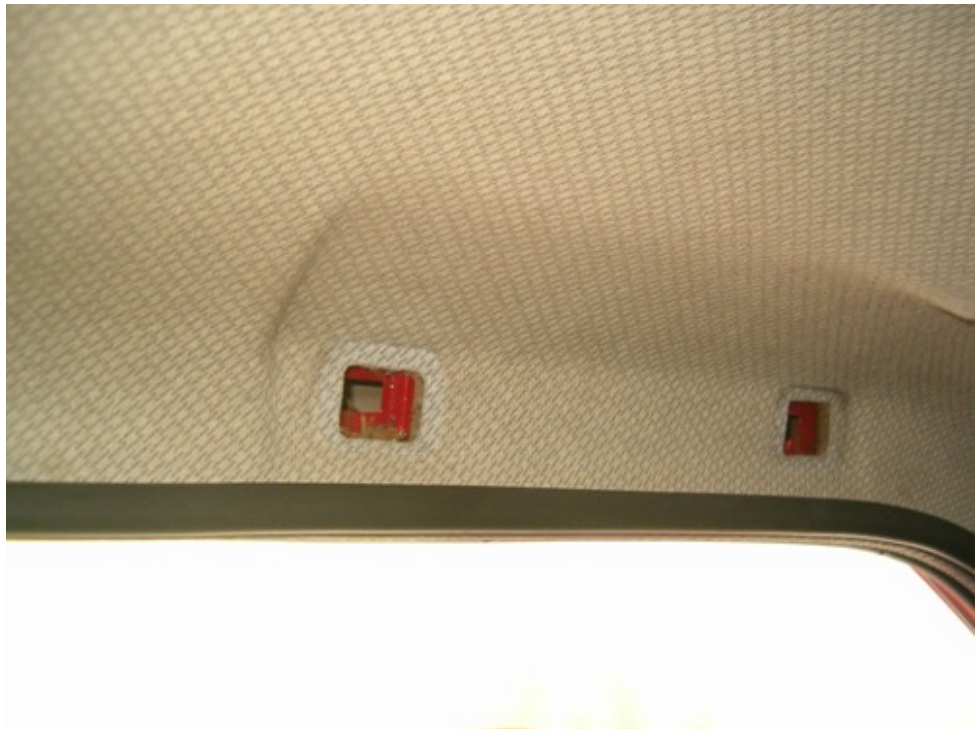
Yet another project for my beloved 33. This time I had to face a poor bonding of the windscreen to the frame. The result was water coming in the passenger compartment and unfortunately it stained the headliner ... However the story is not new; several years ago one nice (rainy) day I found water puddle in the mat of the passenger side. It wasn't difficult to trace the leak as water was coming in from the upper right corner of the windscreen, found its way via the A-pillar and then to the mat. I got hold of a rubber glue from 3M which was labeled "Bonds rubber to metal" which solved the problem temporarily until recently when I had again traces of moisture in the A-pillar.

So I decided to attack the problem radically and have the windscreen removed, inspect the frame for rust which was very probable to exist and glue it back once and for all.

Let's start the preliminary work



As a first step, remove the sunvisors (left and right side)



and then the passenger handles



remove interior light and clock...



... pull the back view mirror out of its seat



Finally undo the 3 screws attaching support plate to roof.



Lower the door gaskets ...



...using a long screwdriver remove the decorative shroud of the A-pillar post



Go to the back and remove the rear interior light.



Carefully remove the headliner by pulling it from the trunk



Interior after the headliner is removed



this is the lower right corner of the windscreen ... I think I see brown metal :-)



This is the right upper corner of the windscreen area where I think causes troubles ...



Once everything interfering with the windscreen were removed, I headed to the windscreen shop





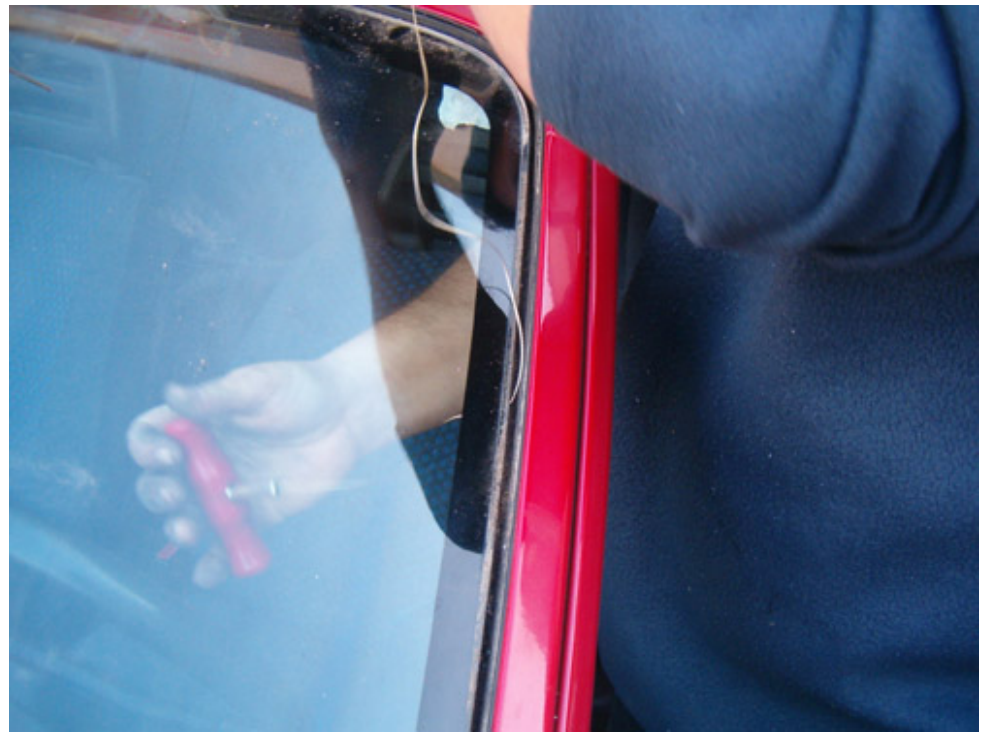
The plastic stops are lowered, so that removal of the windscreen is easier



This is the cutting device that slices the windscreen glue. It comprises a thin steel wire that cuts the glue between the windscreen and the frame.



Initially, Michael cuts the glue at the corner of the windscreen, by pulling the wire back and forth. Do not get surprised if you see smoke coming out of the corner as glue is getting hot from friction and burns out.



Once the opening has been created the wire is passed through and applying the same movement back and forth the glue is easily cut all around.

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The screen is now out of the frame and sits on the bench waiting to be cleaned



My fears were true ... brown metal in the corner. Looks like water was accumulating in this area causing the corner to develop rust



This is the origin of my troubles. The glue has separated from the frame and water found an easy way in



Off we go to the body shop to cure rust...

Constantine hard at work removing traces of old glue. According to the words of the pros, the frame should have been treated with special primer intended for bonding windscreen glue to the metal frame. In my case, this was probably ignored as the remaining of the windscreen glue could be easily removed with the fingers...



Once everything is cleaned rust spots were revealed on the upper side of the frame.



Another rust spot on the A-pillar post



Rust on the upper right corner ...



... and worst on the lower corner. Fortunately rust had not eaten away metal and no rust holes were required to fill up





The grinder rubs rust to clean metal.



Apostolos decided to cure the rusted part by cutting it away and tack welding the gap...



He now grinds the welds to level them out.



Rust inhibitor is applied once the rust spots are clean



This milky fluid will convert to a black finish once it has bonded to the healthy metal



Inhibitor was applied to every area that had caught rust. This way we are confident that rust never forms again.



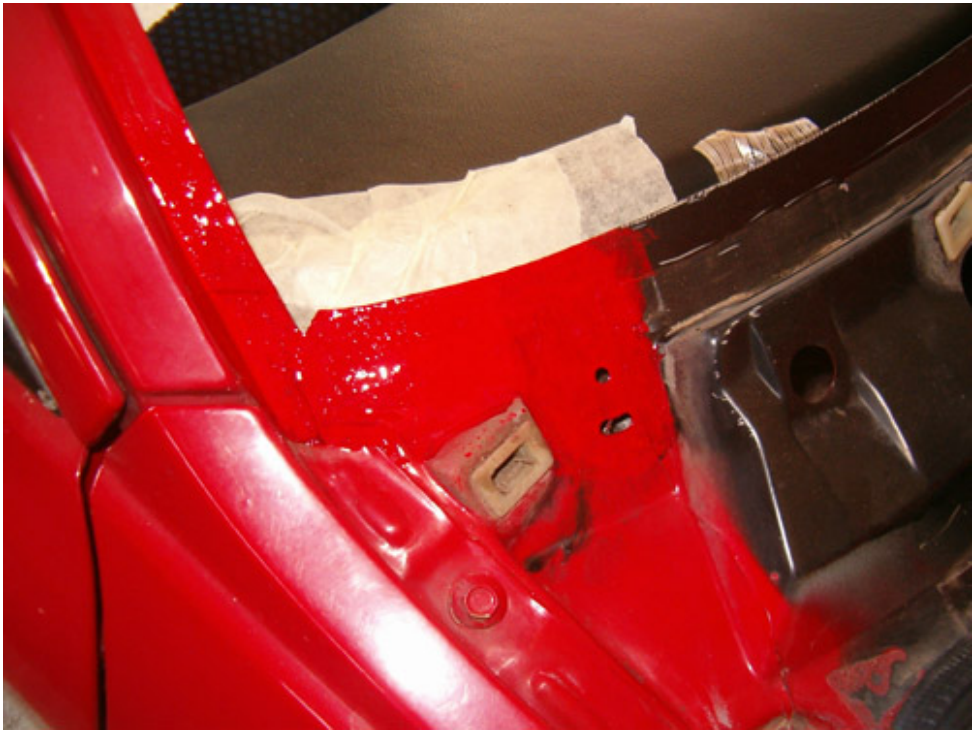
Primer is now applied



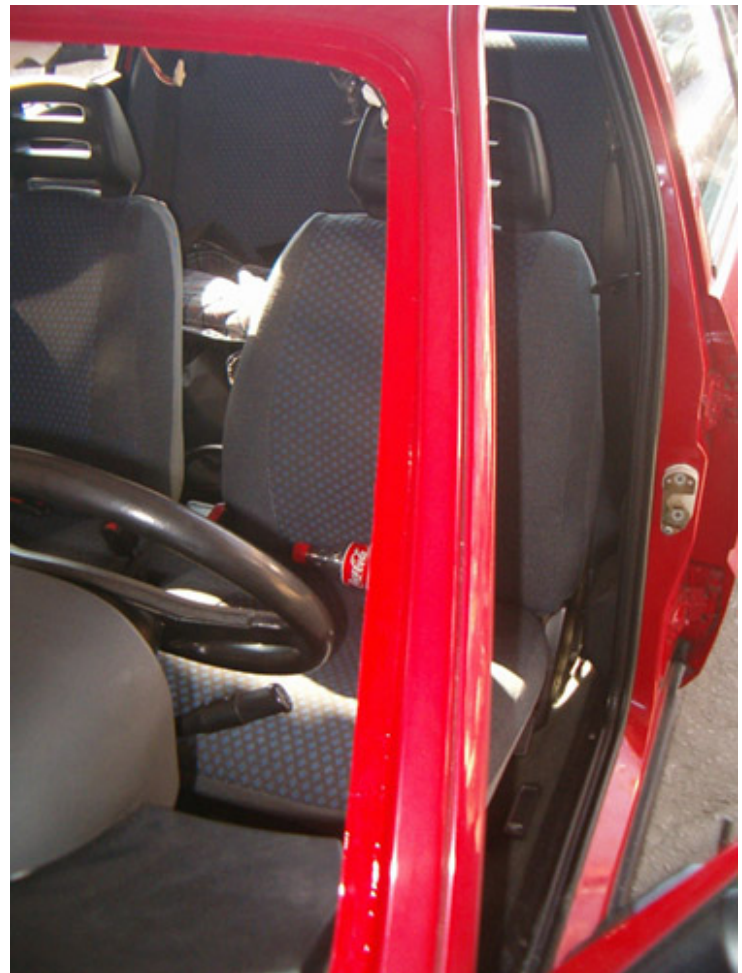
A-pillar posts primed



Lower frame areas are also primed...

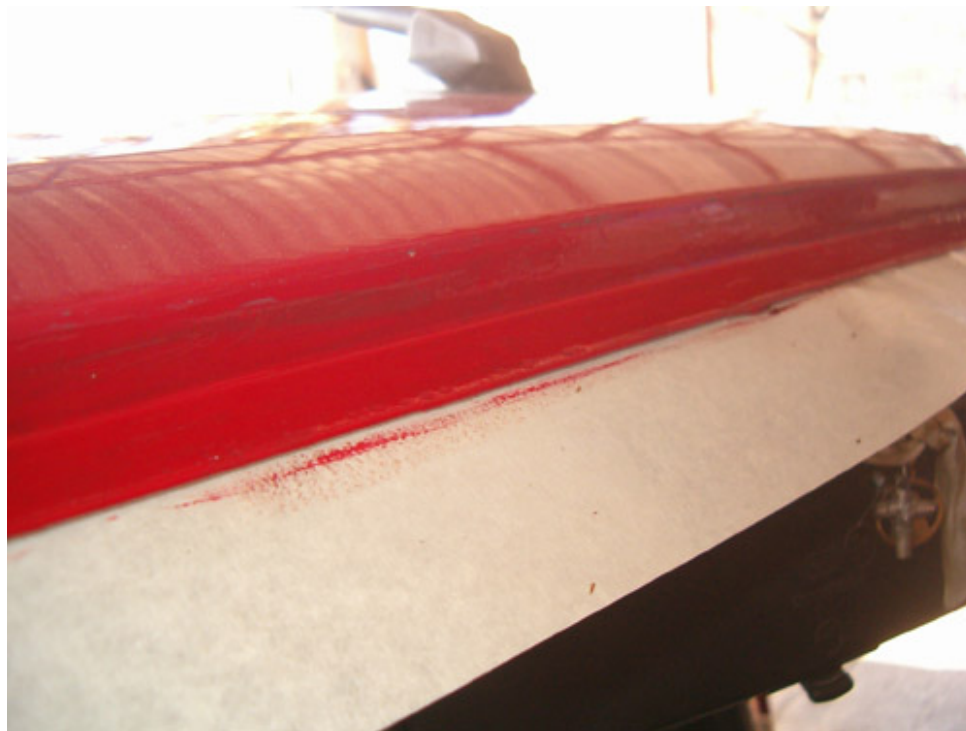


... time has now come to finish the repair by applying a final layer of paint



A-pillar posts painted in red ...





... as well as the upper right corner and upper frame. We decided to help the fresh paint dry, by putting the car in the paint booth and adjusting the extractor to circulate air overnight. We took this decision in order to guarantee that paint is dry and bonding of windscreen glue is tight and secure.

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The 33 is now ready to have the windscreen installed. The windscreen expert has prepared the screen by removing traces of old glue.



The decorative rubber element is installed...



...and the rubber strip is carefully attached to the frame. The adhesive area of the strip should be attached to the frame only upon first try as glue will otherwise remain to the frame instead of the strip. So be careful here. A wise idea is to use a heat gun in order to heat the strip before installation; rubber strip and its adhesive will be easier to apply.



A close up of the strip. Notice the grooved surface of the strip. Actually this is done on purpose so that the final decorative strip hooks in the strip. Think of the strip and the decorative rubber like a fish scale which easily permits one way move but almost impossible the other way around.



Rubber strip is half installed...



and Michael has almost finished. Notice the heat gun that helps the strip and himself to apply it to the frame



Michael now applies primer which enforces proper bonding between windscreen and metal frame



A close up of the bonding primer.



Final layer of primer is applied ...



and we will wait for at least 15 min to let it dry.



Meanwhile we go back to the windscreen so that we prepare the windscreen glue to be applied



A first line of windscreen glue is applied. Notice the thick and tall layer of the glue; it is as high as 3 cm. This glue is important to be applied in plenty as it will dry within 3 hours whatever the circumstances are.



Windscreen glue is applied all around





Close up of the glue while it is being applied; notice the height of it along with the quantity.



Michael has placed these rectangular pieces of rubber which will guide him regarding the level of the screen compared to the frame of the windscreen. We wouldn't want a windscreen that sits below the level of the frame.



The glue has made a full round around the windscreen reaching the starting point.



The suckers are now doing a nice job. Michael and his father are merely installing the windscreen.



The windscreen gaps around the frame are now adjusted and the plastic stops on the bottom of the frame are locking the final position of the windscreen



Close up of the bottom corners.



Michael is applying the final finish of windscreen glue to the gap and the decorative rubber strip is finally installed



In order to be safe than sorry, adhesive tape has been used in order to keep the windscreen fixed in its position until the glue dries. After 3 hours from fitting, the vehicle can be normally used with no problem whatsoever.

Finally, restore the headliner, sunvisors, roof handles etc. The result was 100% successful with no water leaks! I surely have nice words for the work of both shops.

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