

Rear Window Regulator Fix

This is my first attempt to fix the dreaded window regulator issue. It happened on a friend's 320d to the rear left passenger door.

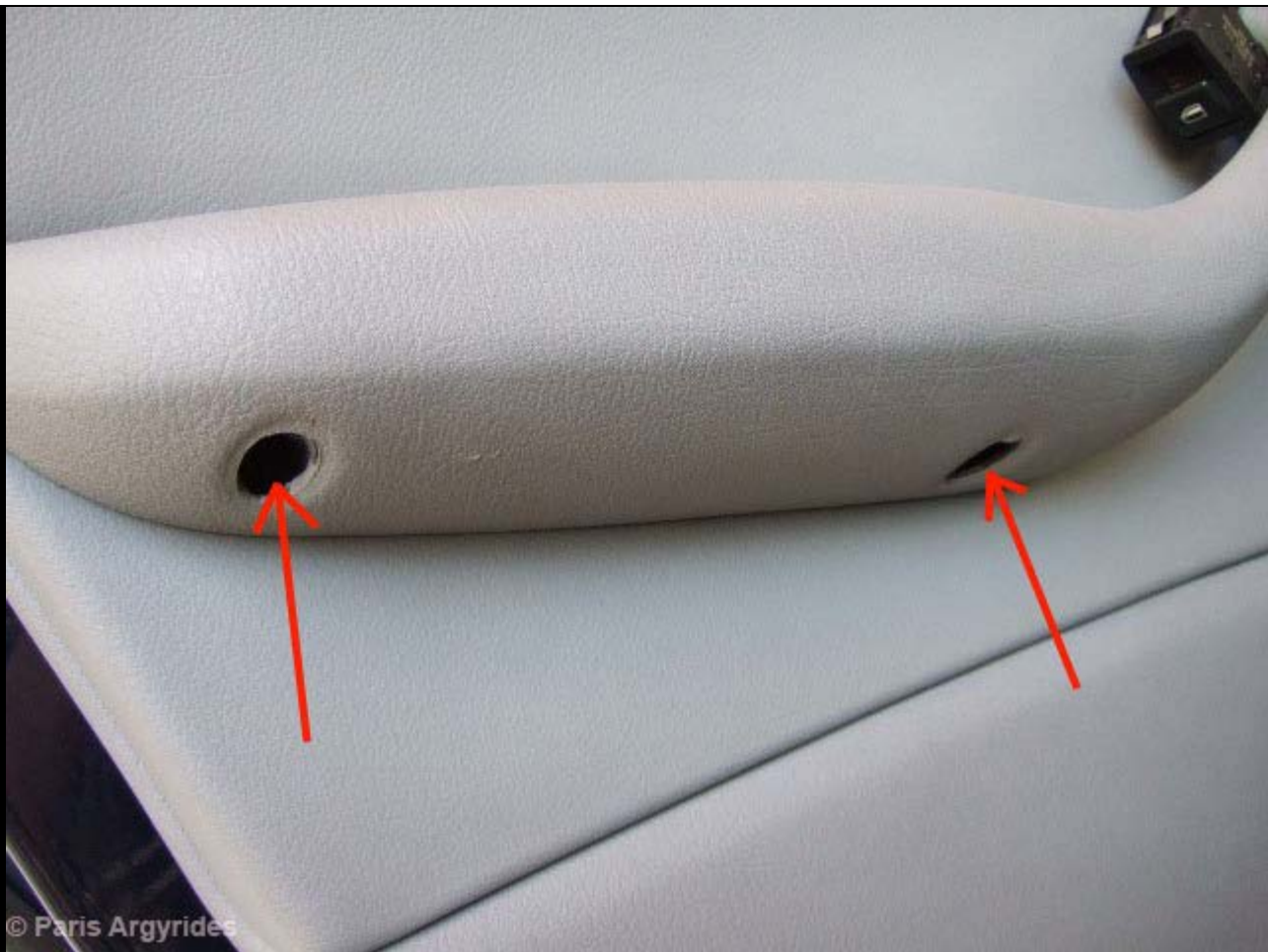






To start, the door card must be removed. 2 torx screws behind silver trim, 1 behind window switch and 2 on the armrest





Window switch is removed using a small flat screwdriver



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The right screw behind the silver trim is double the length of the other screws so keep that in mind when reassembling



Disconnect window switch from its plug



Pop the door card off just a bit by pulling from its perimeter, to create just a little space in order to disconnect the door handle.



Once disconnected, place the door card somewhere safe. You are left with the final cover which is for sound deadening I think. It's held in place by butyl tape so wear gloves when removing it.



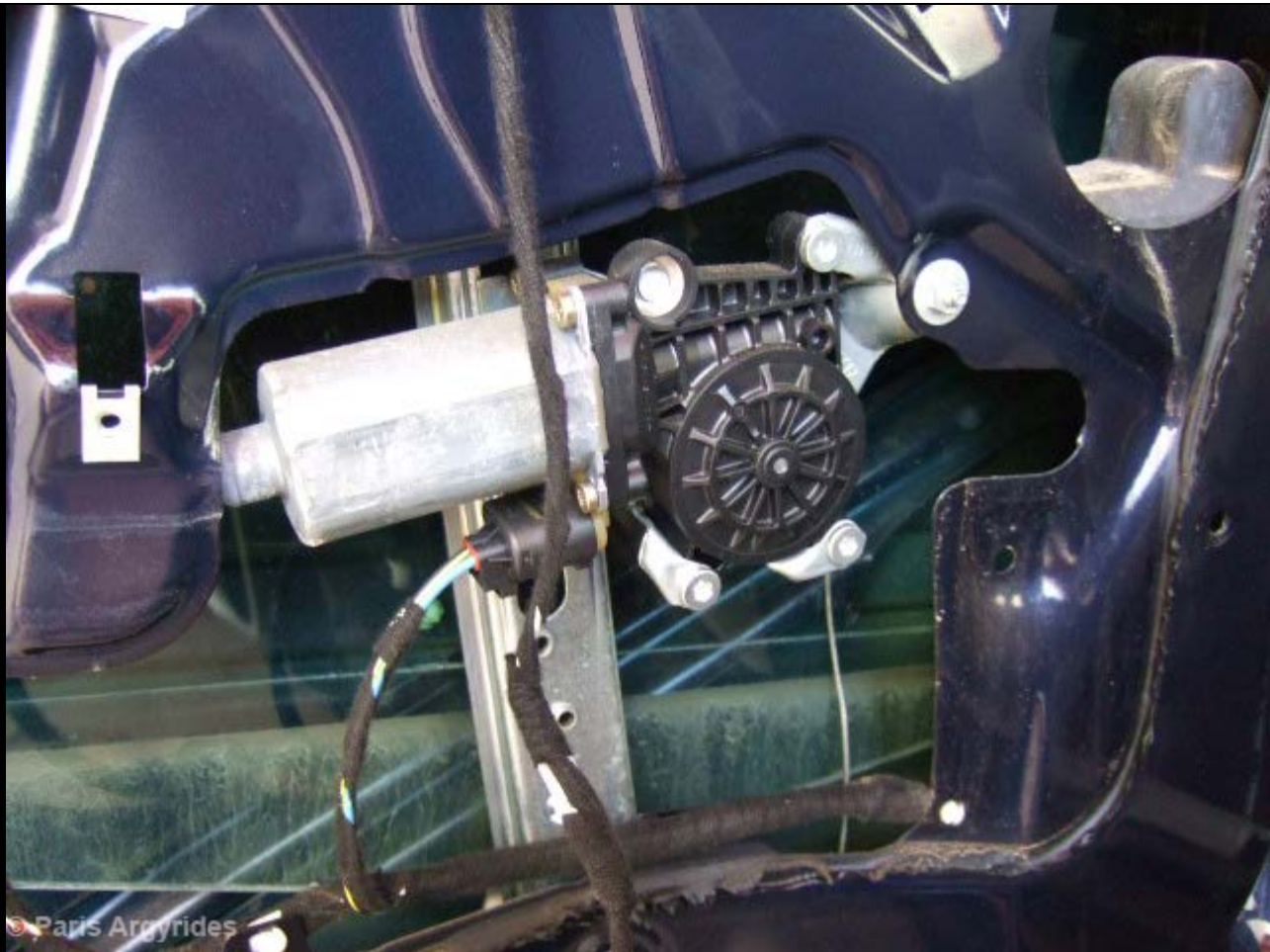
Very sticky but with some patience you can get the foam off without tearing it



Once removed, the window mechanism is revealed.



Window motor closer.



Glass up (or down) steel wire loose. Now, at this point I realized that more damage had happened and not just the small and easily repairable window regulator. So I had to remove almost everything to get the whole mechanism out. You may skip these steps if you are just fixing the window regulator.



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Secured the glass with tape just in case...

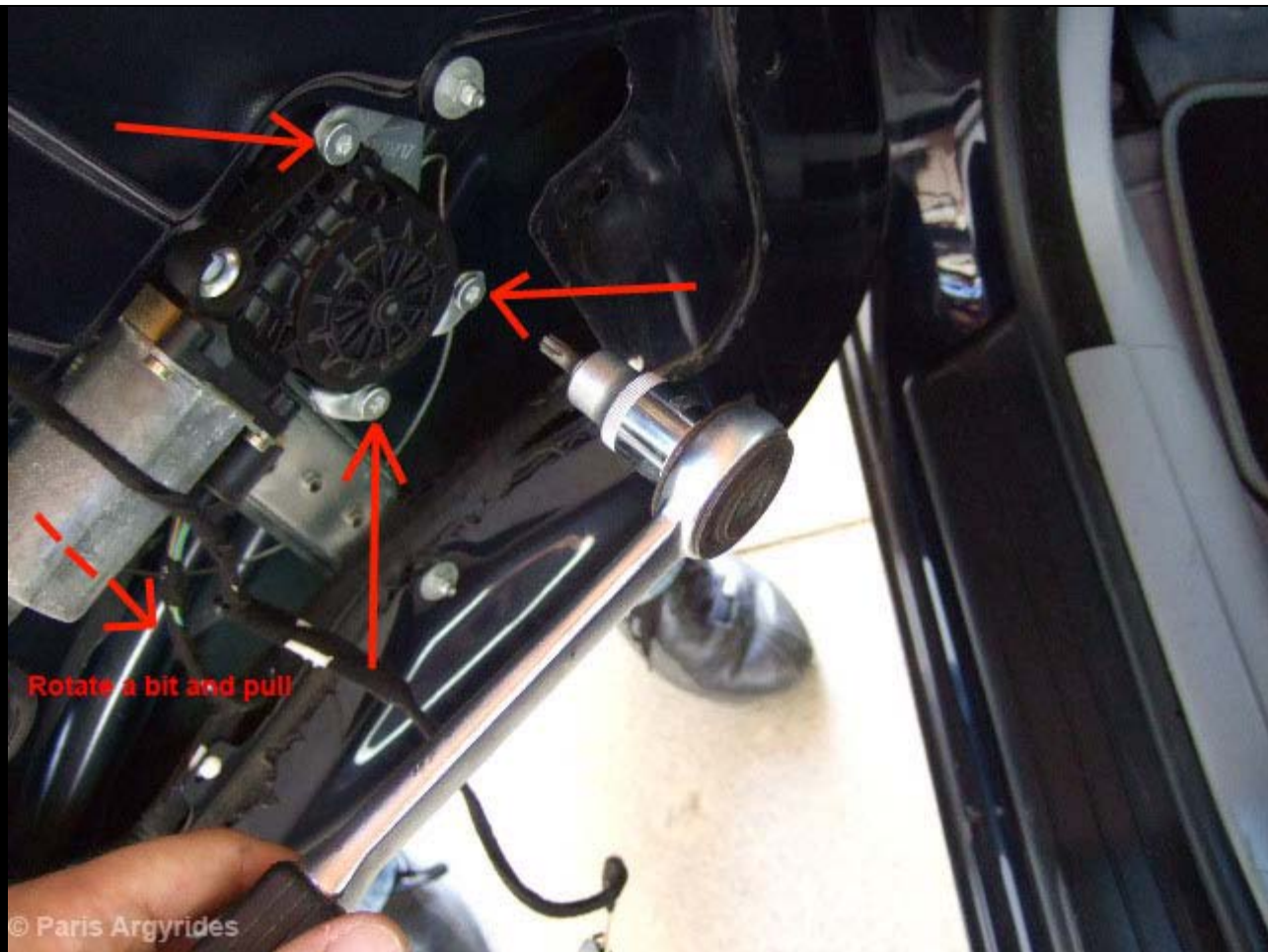


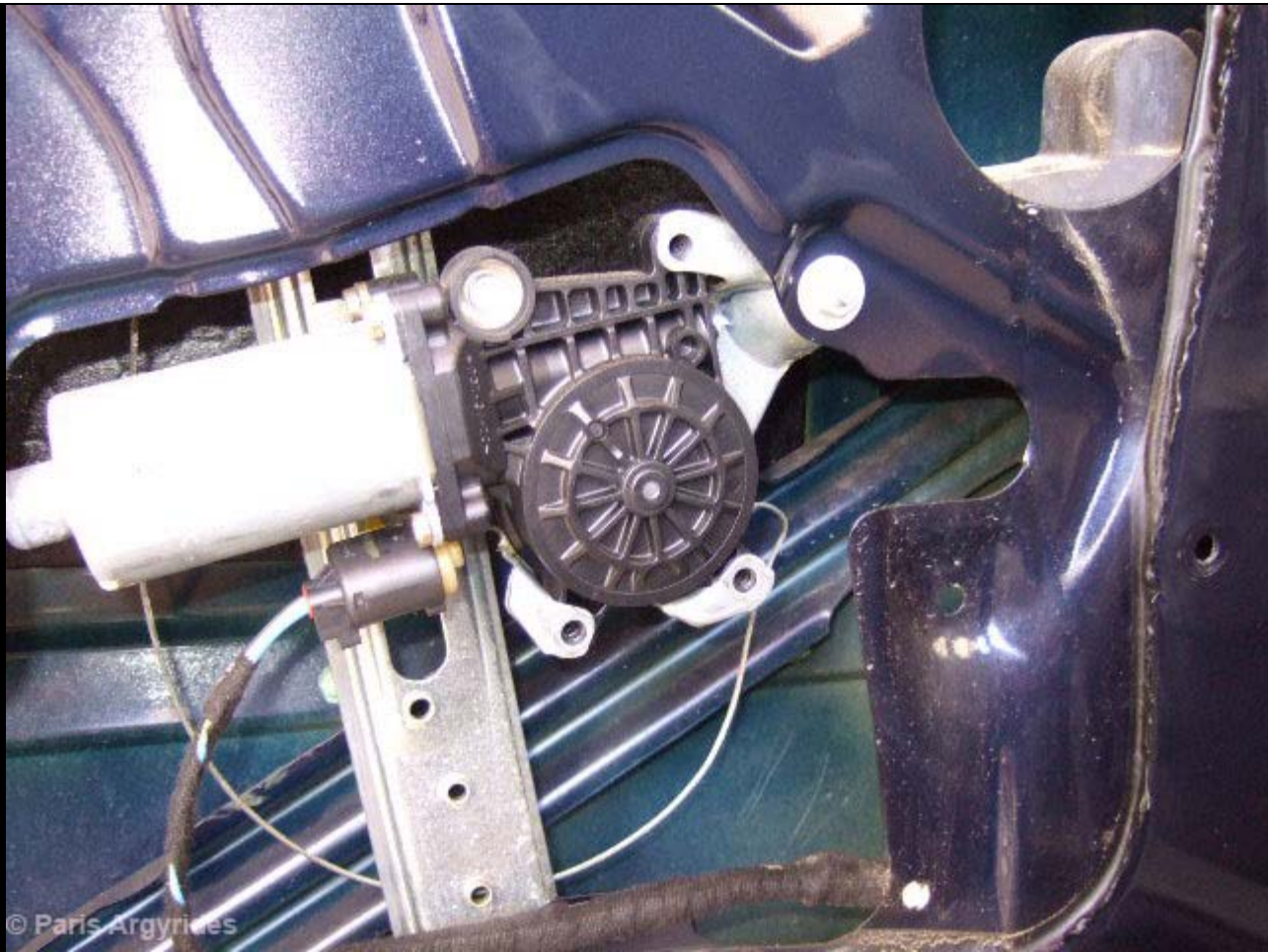
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Window motor must be removed now



Remove the 3 bolts and twist the motor downwards a bit, then pull. Pretty intuitive. Disconnect its plug.





Motor gear seal in pieces!!! I wonder if that seal is sold separately



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This plastic gear/rail has the steel wires wrapped around it and is powered by the motor. The wires were such in bad shape that had to be replaced, hence the removal of the mechanism.

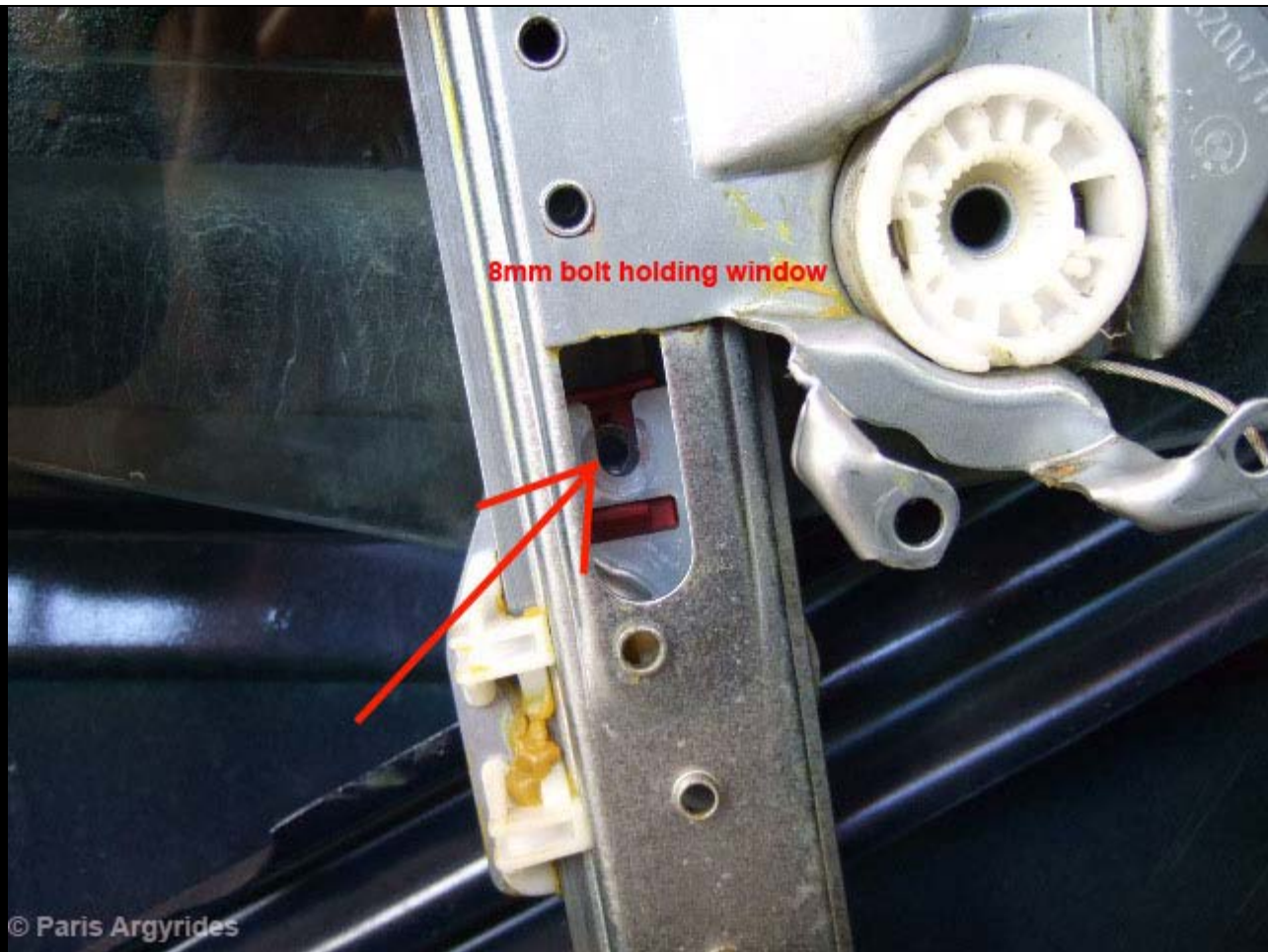


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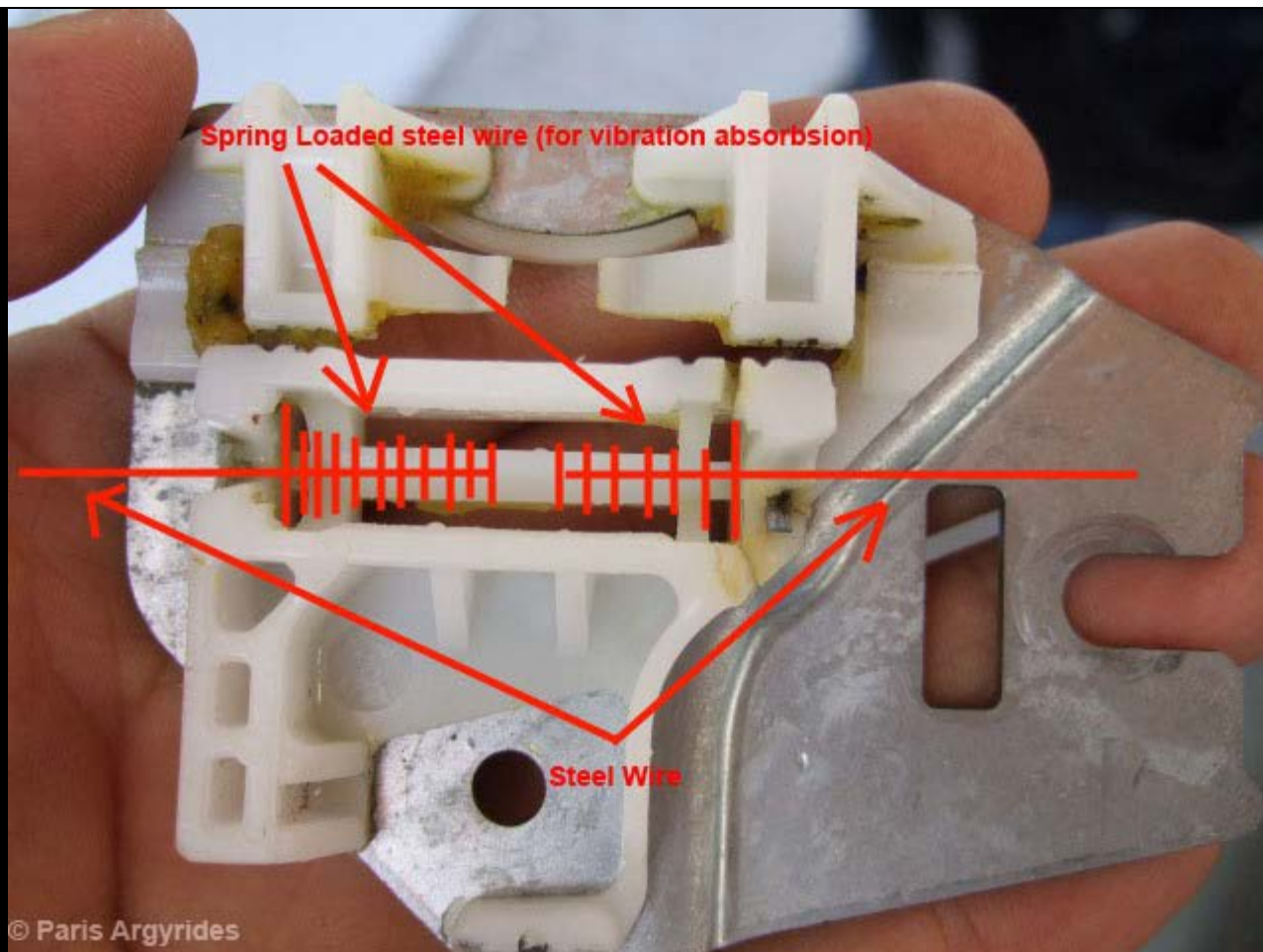
Chewed steel wires



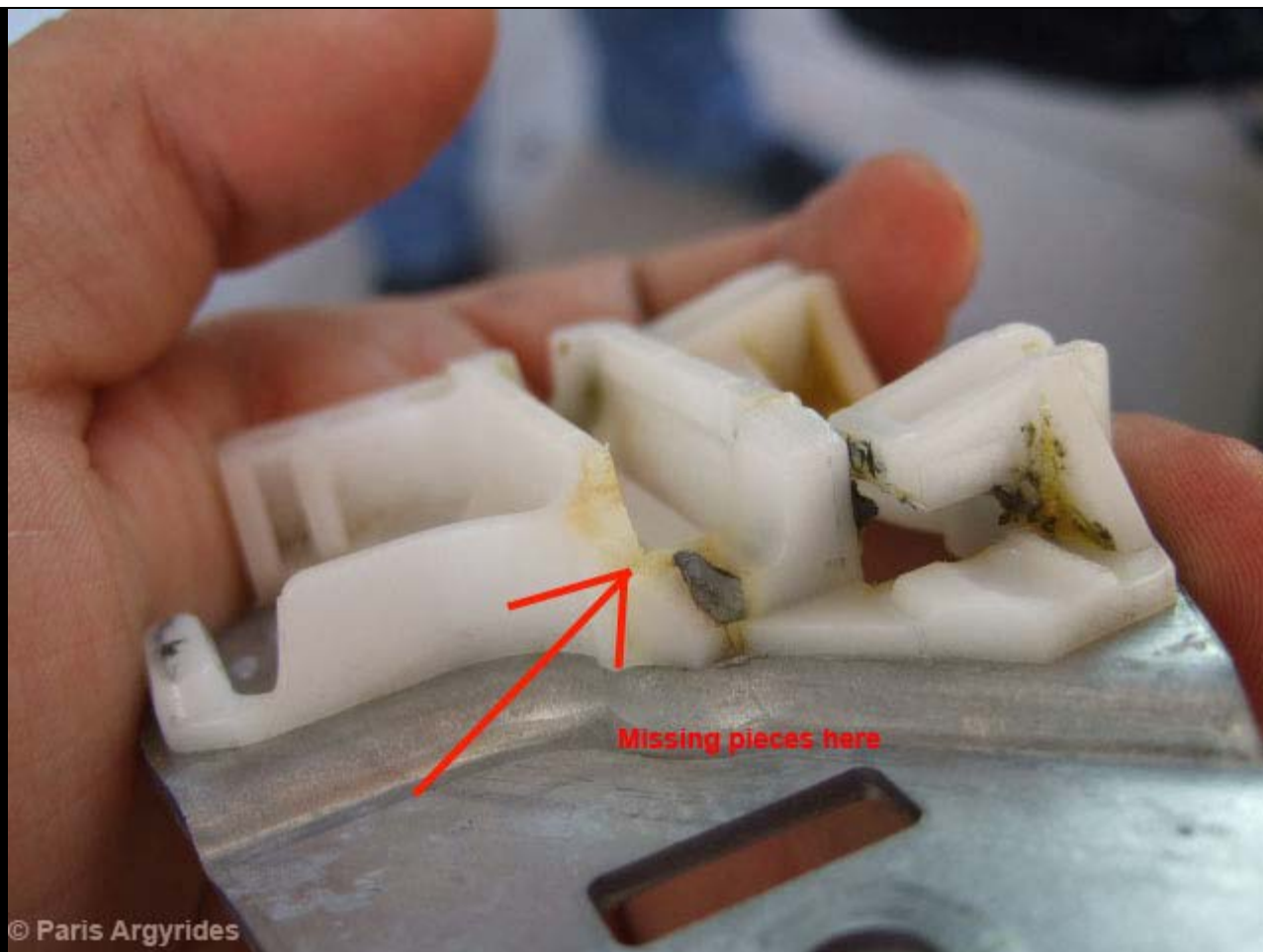
Now you want to remove the window guide. Remove the tape holding the glass, and lower it until you can see the 8mm bolt holding the glass on the guide. Remove the bolt, lift window and secure it again with some tape. To remove the window guide, twist and pull. Again, pretty intuitive.



Here's how it was supposed to be. 2 steel wires are located in the cylinder. One is for moving the window up, the other for moving it down. They were spring loaded to perhaps allow some up/down movement of the glass and to prevent vibrations.



Here's where the poor design comes into place. Why on earth would you make a plastic mechanism to hold a permanently on tension steel wire which gets abused every day? The plastic snapped, allowing the steel wire to come out of place. It took me some time to remove the grease in order to repair this.



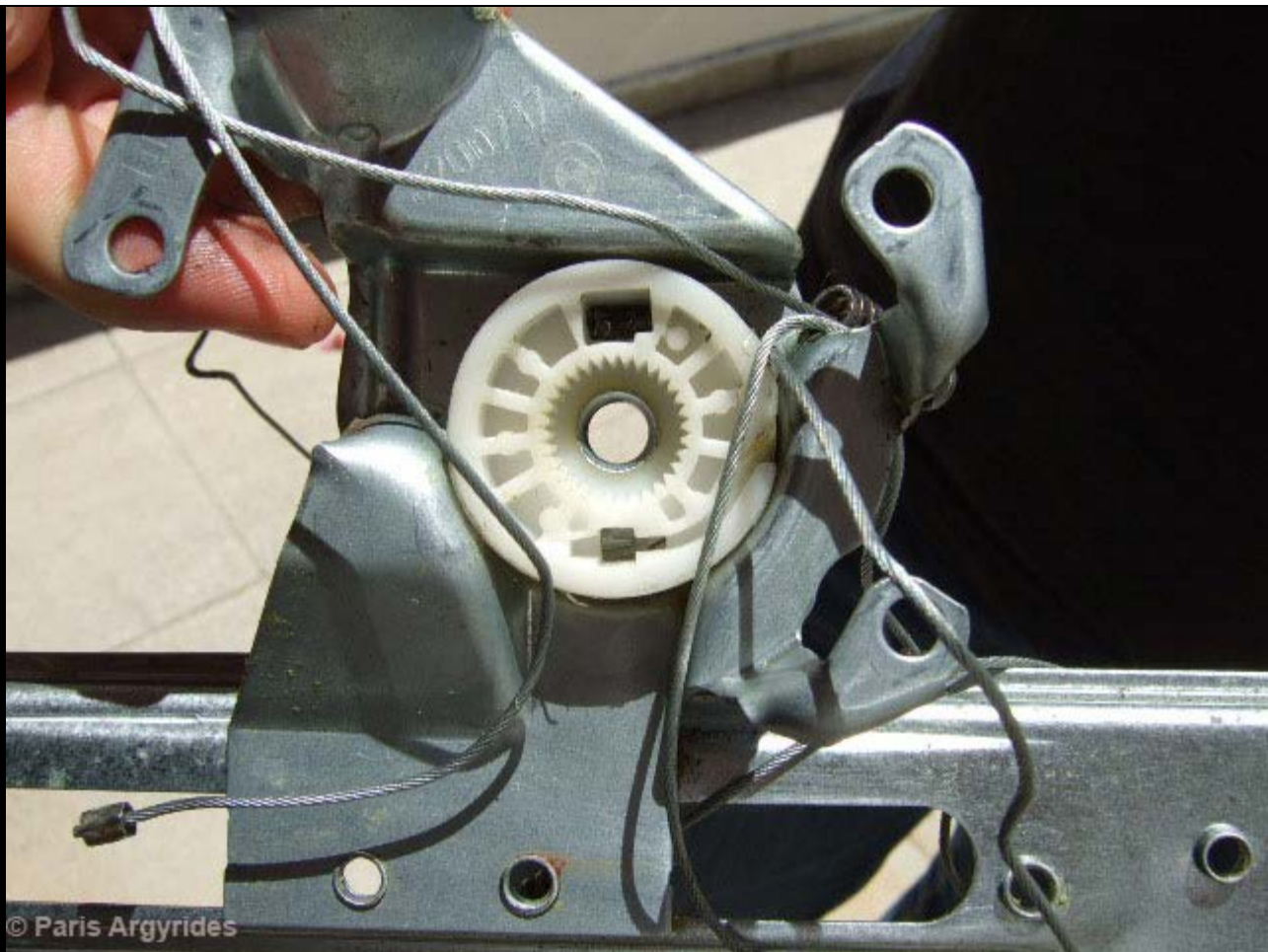
Because of the extent of the damage, I decided to remove the whole window mechanism to see what is repairable and not. It's held into place with 3 10mm bolts



Removed:



What a mess!



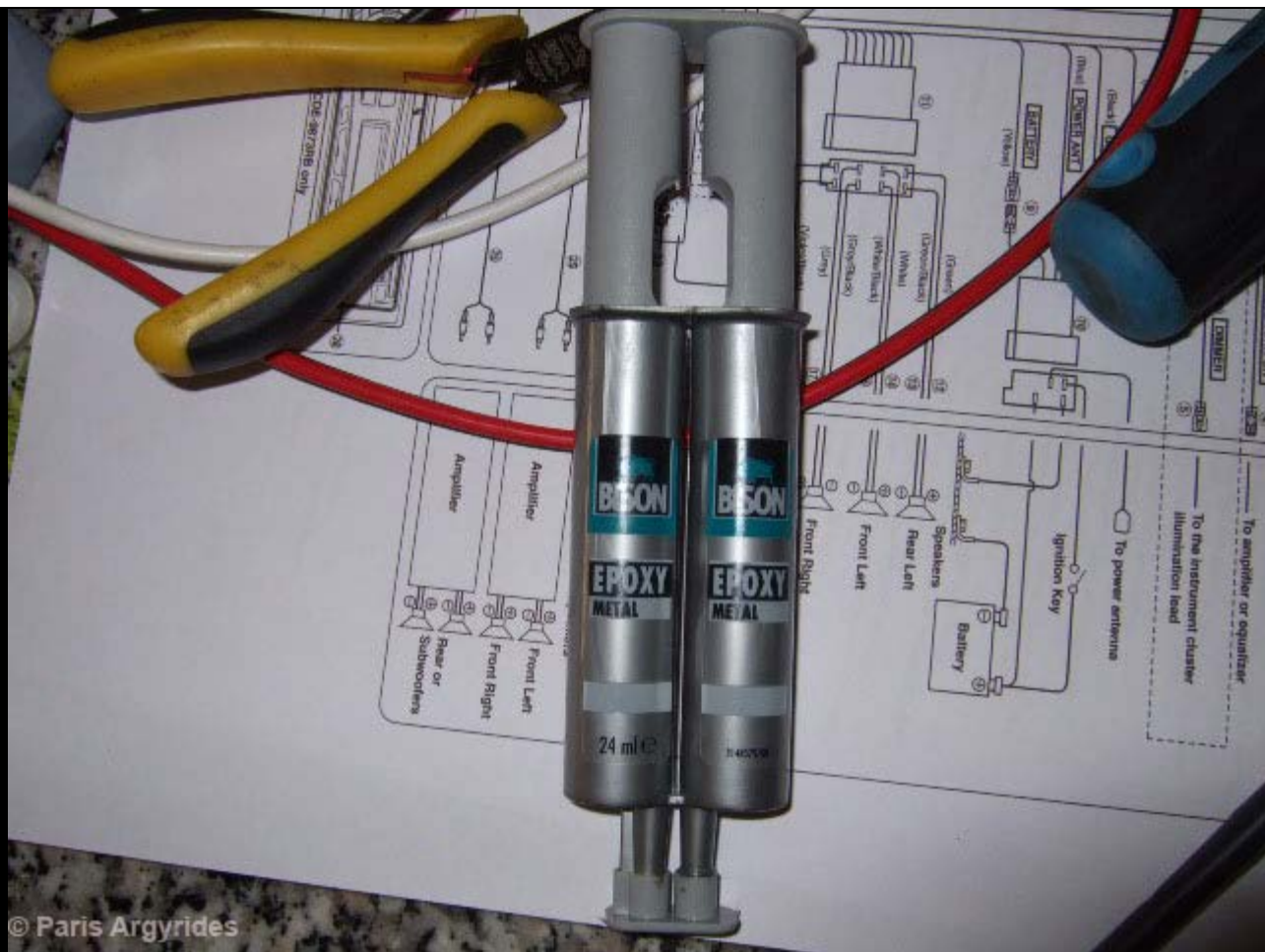
This guide was wobbling when I checked it so it needed replacement.



Another guide but not worn



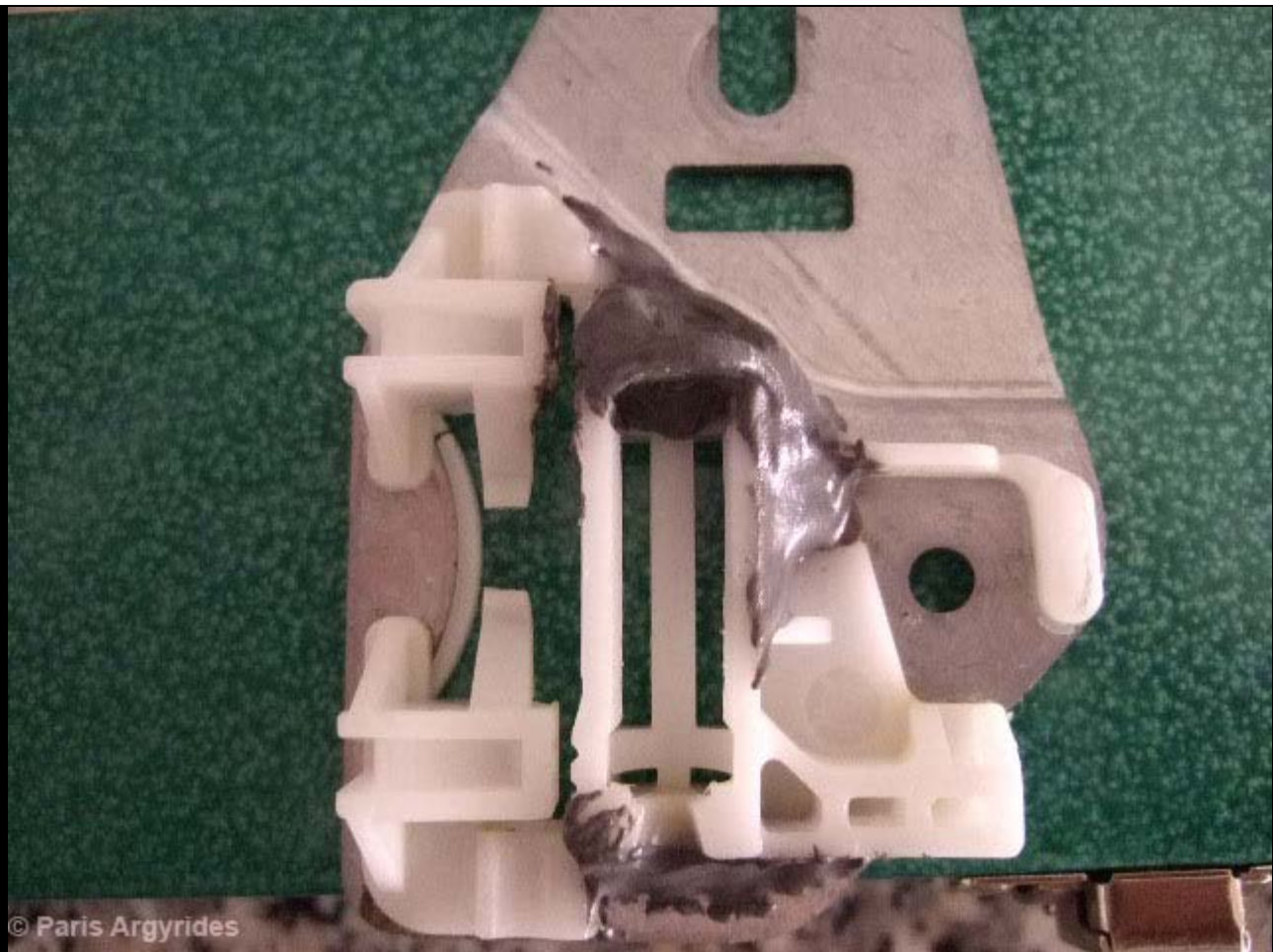
Since a new window mechanism was required, I took my time to try and repair the current window guide to have it as a spare.
I used this glue. Bison epoxy metal. It takes 2 days to dry but once dry, it will never come off again.

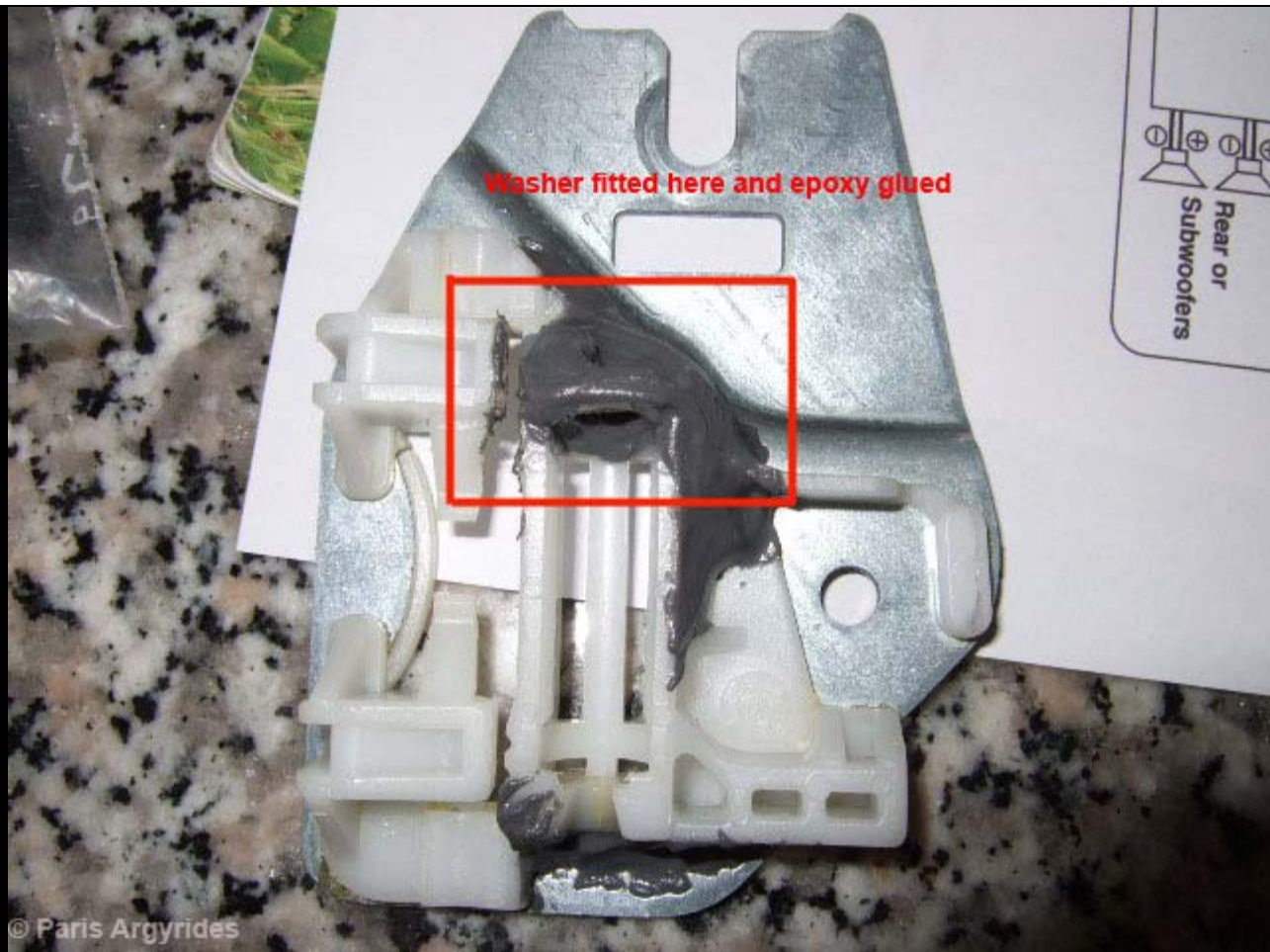


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To repair the broken window cylinder, I fitted a metal washer and covered it in glue. There's plenty of space so use plenty of glue.







That's it for now. We are waiting for the new window to arrive to start the re-assembly procedure.

New window regulator mechanism. Same part number, same crappy plastics. I wonder how long it will last before breaking again



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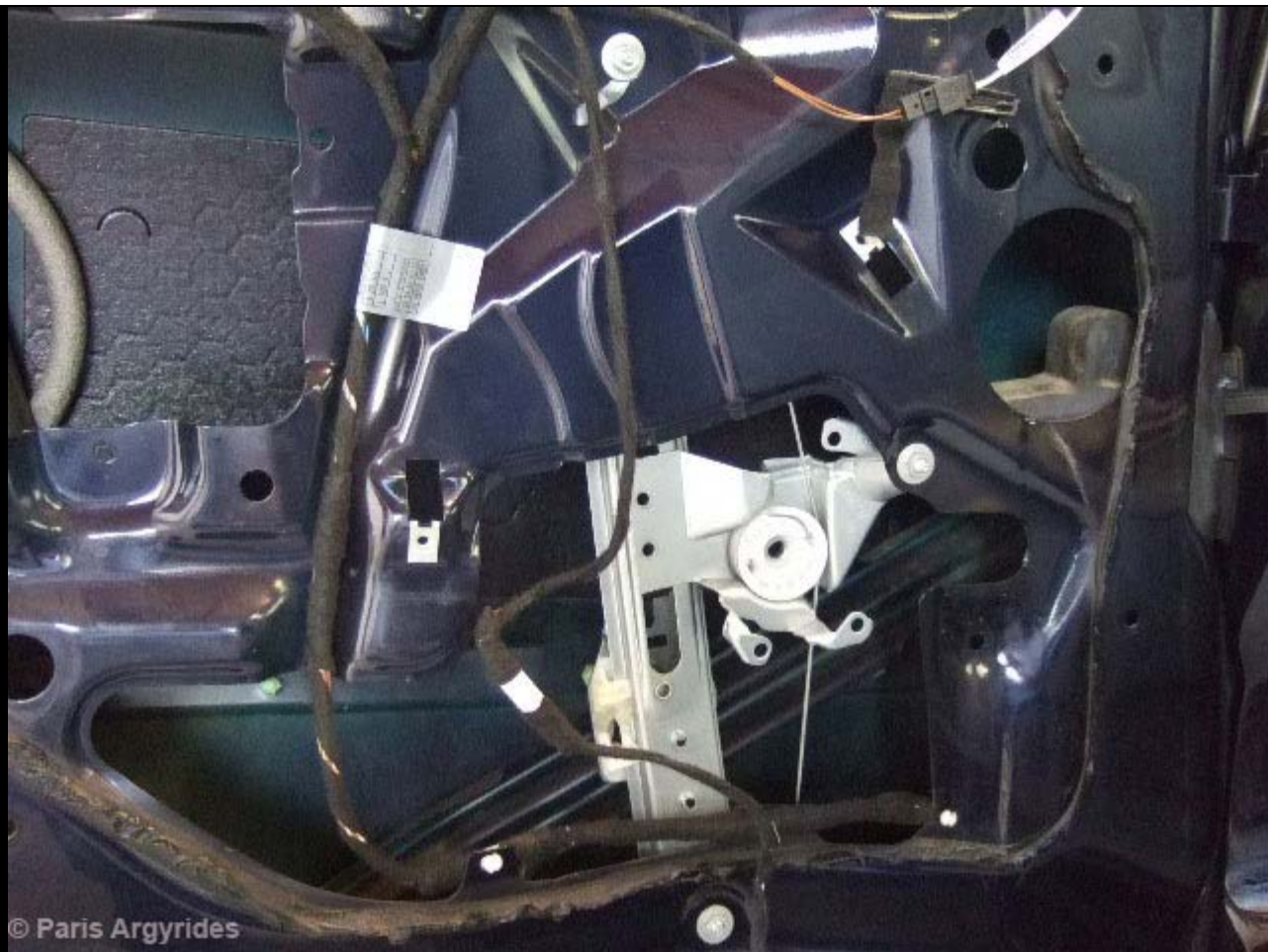
The glass secured with a piece of wood and some cable ties, to prevent it from dropping while we were waiting for the mechanism to arrive.



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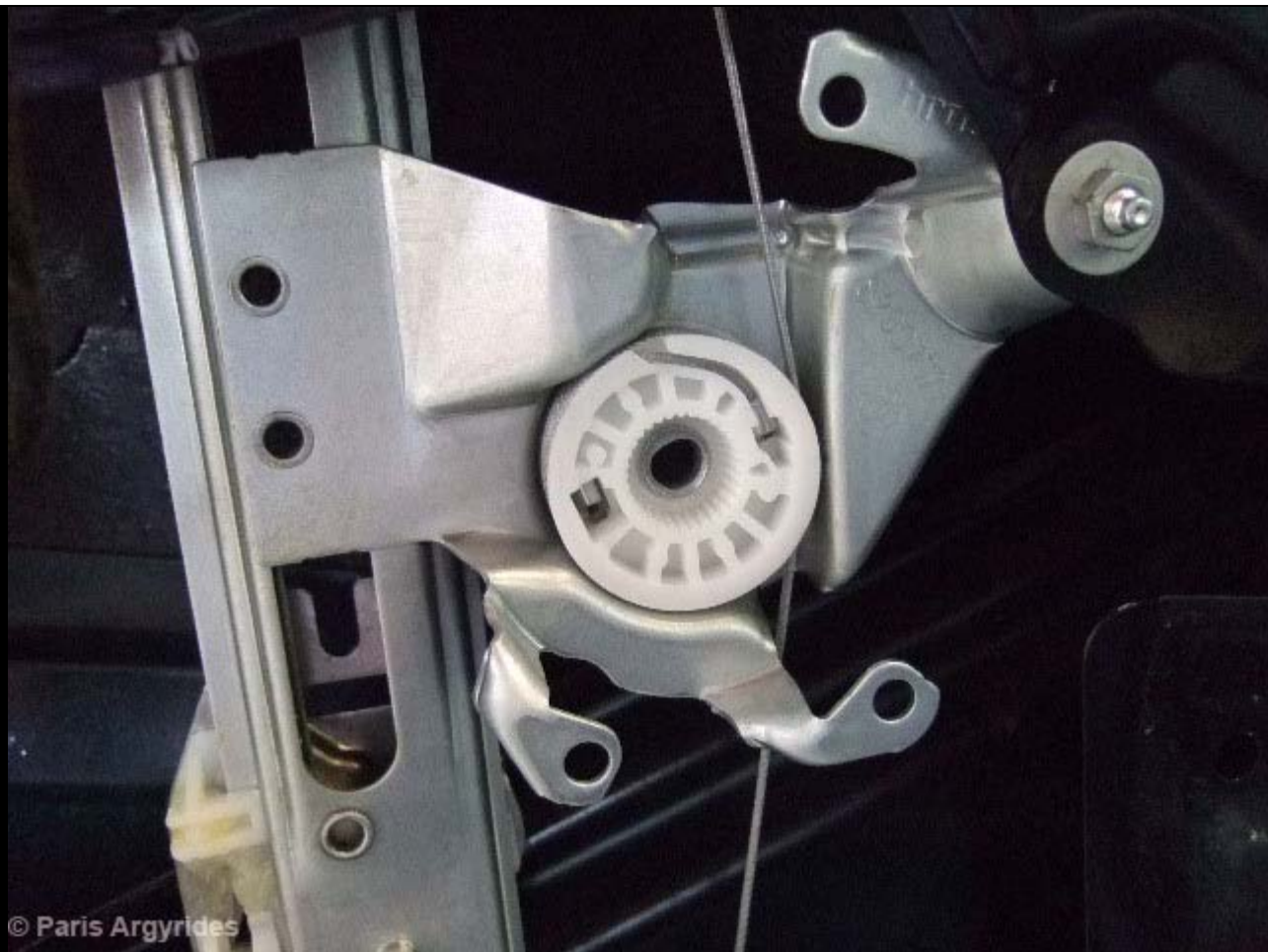


Mechanism in place and secured with the original nuts.



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Nice and tidy. Still, so much plastic.



Lowered the glass and secured it to the mechanism with the 8mm bolt



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Re-installed the window motor and tested before final door assembly.

Apparently the glass now moves faster than the glass on the other side. I wonder if the right window regulator is on its way as well... Time will show