

Removing the Driver's Door Panel and Replacing the Driver's Door Glass – D. Forgie, June, 2013

I didn't want to know how to do this, **BUT** it became necessary when I came home from a recent holiday to find this:



(photo Courtesy of Iskolnick (Gabriel C)) (the patch is courtesy of my next door neighbour, thanks Noie)

Appears to have been drive-by vandalism, nothing stolen. Not that it matters. Left a mess and a potential bill of \$200 (my deductible) (glass alone is at least \$240).



So the first order of business was to contact my insurance adjuster. No problems, I could get it done at “Speedy Autoglass” or wherever. ***All*** I would pay would be the \$200 deductible. Hmm....these guys won’t have a clue about a 1998 car. I’ll do it myself. Call Kris at VM Autohaus to get pricing on the glass. My discounted price would be \$240 plus taxes, 2 days. Hmm....I’ve got things to do that need the wagon right away (but was raining so taking the patch off to drive the car wasn’t an option). So I put a call out on our “local” BC/Alta/Sask UrS email list. Got a few responses. The best response was from Iskolnick (Gabriel C.) who dropped off a window while I was away at the library. (Thanks Gabe) Fantastic. Now to start.

First thing was to check the FAQ for info. Two excellent resources to base this on:

1. Jimmy Pribble’s door panel removal: <http://forums.quattrroworld.com/s4s6/messages/41345.phtml>
2. Marvin H (MarvelousS4)’s Door Glass DIY: <http://forums.quattrroworld.com/s4s6/messages/190258.phtml>

I had previously used Jimmy Pribble’s DIY to remove the right rear door panel. Marv H’s DIY went beyond that and was exactly what I needed because of the glass R&R aspect. The “only” issue was both Jimmy and Marv didn’t deal with the slightly more complicated driver’s door panel because of all the extra window switch and mirror and seat position memory wiring. No biggy but there are a couple of tricks. As a result, I decided to document the process for a DIY.

The panel removal doesn’t need to be covered again. Read either of the two DIYs linked above for that. The first new thing is the memory switch panel in the door pocket. It is held in by one Phillips head screw (likely filled with caked-in gunk so you might want to clean it before getting the screw-driver on it). With the screw out, tilt the switch panel out:



As you remove the memory switch panel, you will disconnect from the plug. This will be a challenge later (we'll deal with it later):



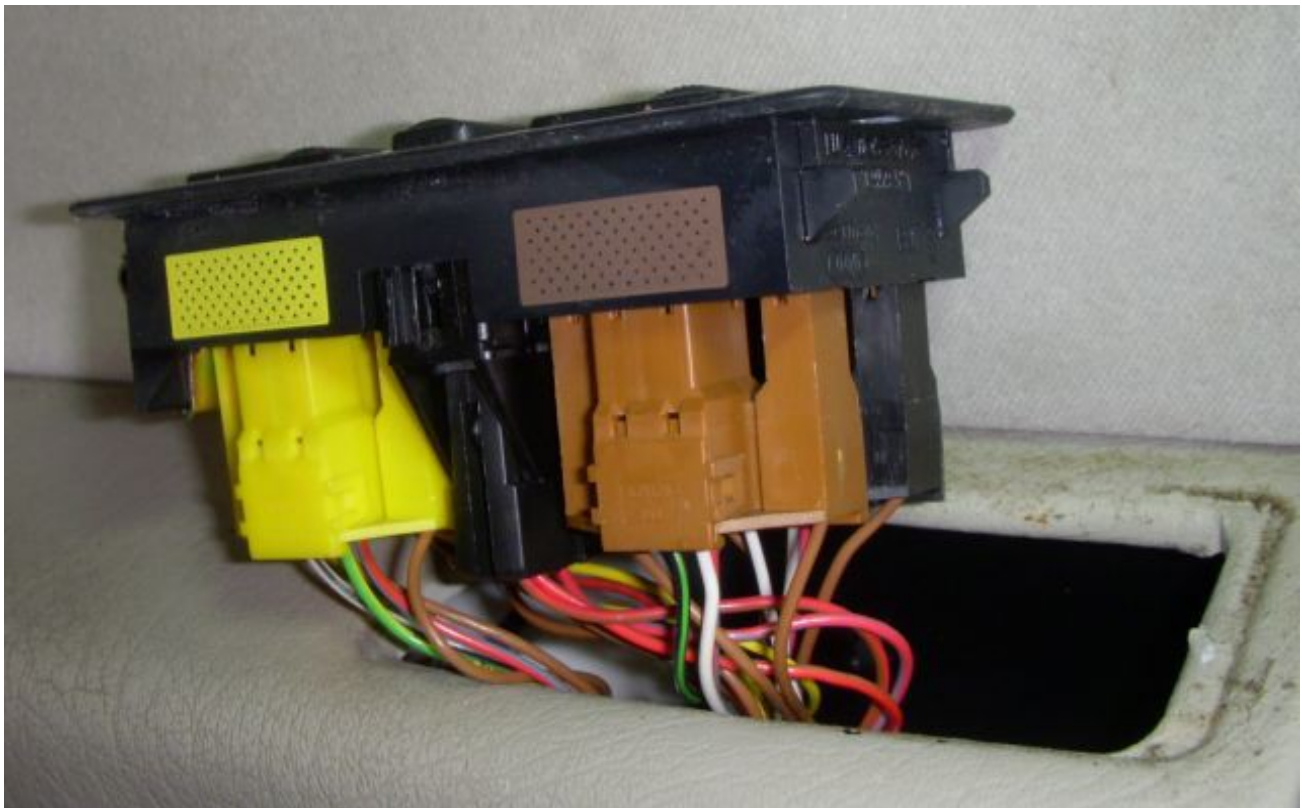
The next new challenge is the window switch panel. I knew that it had to come out from the rear but I did not know why. This is why (a big metal spring clip that needs to be pushed in as you pry the switch out):



Before you go ahead, if your glass isn't broken, turn the ignition to RUN and use the window switch to run the glass all the way into the door. To remove the switch panel, you need to use a putty knife to get under the rear edge of the window switch panel and onto the upper edge of the spring clip. Use a 1.25" (31 mm) putty knife or stiff(er) equivalent. Get it under the lip of the switch panel. Angle it down to catch the top of the metal spring clip, then push in and pry up:



Once you lift the switch, you will see that the Audi engineers have been clever. There are 5 plugs, one in the middle and the four outer ones. The middle one is a different shape and the outer ones are colour-coordinated with the labels on the edge of the switch panel. No brainer for the installation later. Note the two plastic tangs at the front edge.



To carry on, you need to remove the plugs from the switch (and push them through the armrest hole):



So assuming you followed either Jimmy's or Marv's panel removal DIYs and you are ready to remove the panel, there are a couple of extra driver's door issues. This first is to pull the window switch wiring out of the back of the door panel, removing the big white foam sealing plug as you do so:



The second is, in addition to the speaker wire connector, there is also the seat/mirror memory harness connector that has to be disconnected from the sub-harness that is attached to the door panel. Be aware that this plug is actually in two parts, one smaller and one bigger. I didn't know this and the smaller part went flying off into the garage ping-ponging until it went silent. Fortunately, it landed on the roof of the avant. (The part(s) you need to remove are on the right of this photo – leave the bit attached to the door panel by the metal clip alone):



At this point, you are good to go and finish with Jimmy/Marv's door panel removal instructions. One extra note is the door panel is held into the door by eight (8) plastic tangs. There are two on the leading edge, two on the trailing edge and four (yes, 4) on the bottom edge. No biggy. What I didn't notice immediately was all eight sit on rubber insulators (impressed by the level of engineering yet?). I didn't notice this until later when I saw that one of the rubber insulators was missing. I had vacuumed it up with my shop vac as I vacuumed (and re-vacuumed and re-vacuumed) the broken glass out of the door. As it turned out, when I checked the shop vac, there were 3 rubber insulators there. I found the location for all three and re-installed them when I put the door panel back on later.

Okay, the driver's door panel should now be off. You should be looking at this:



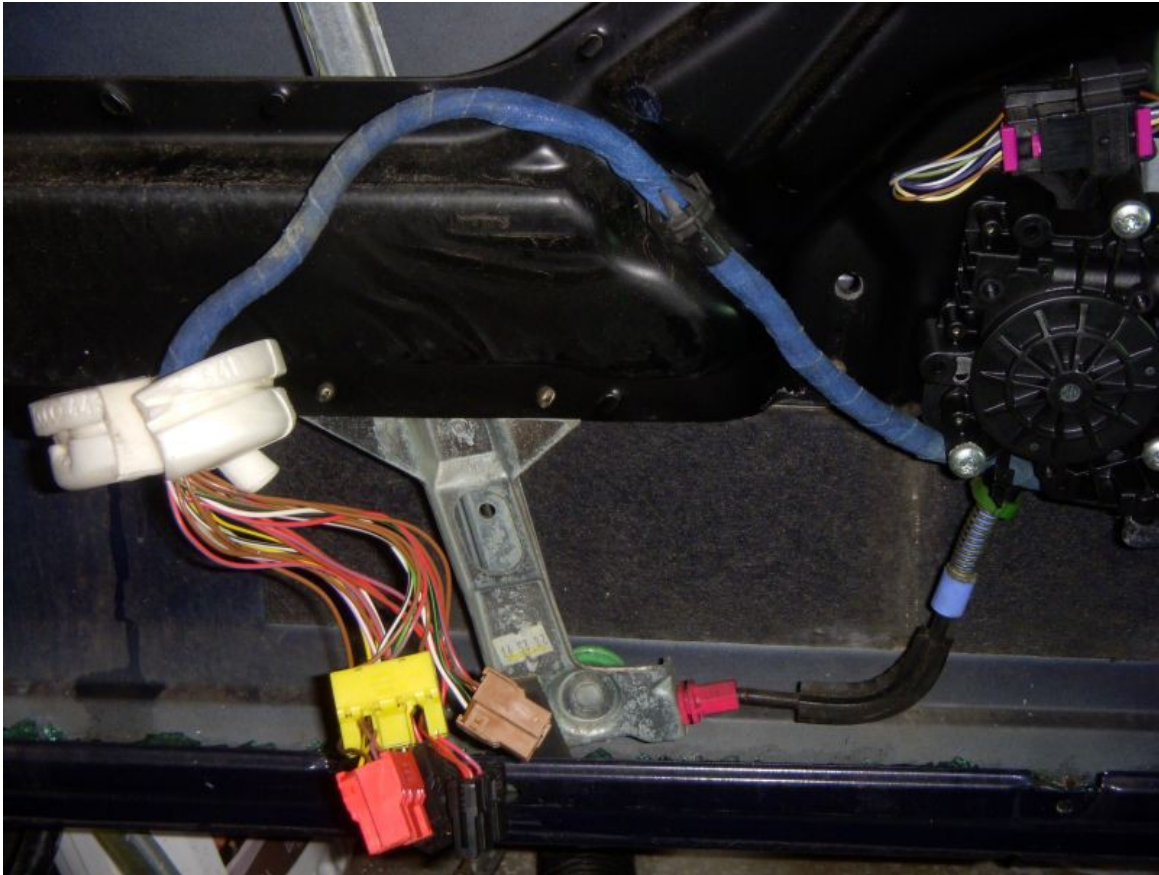
Note the location of the wiring including the green clips holding the blue wiring bundle to the door lock switch. The window switch wiring is with the big white foam plug on the middle left. The seat/mirror memory switch wiring and the door speaker wiring in on the lower right.

Remove the green clips (squeeze the tangs together and pry out). Pull the plastic film off the black plastic plug and remove the insulation panel from the door. Note the location of the wiring that remains, including the clips. For some unknown reason, I didn't take a wide-angle photo at this point. *Duh*.

Remove the foam bits that the door panel rested on (again more excellent engineering) in preparation for removal of the window cassette.

If the door glass is down, disconnect the power connector from the window regulator motor. If you didn't run the door glass down before and the window is not broken, attach the black switch connector to a switch in the switch panel and, with the ignition at ON/RUN, run the glass down into the door before you disconnect the regulator motor. My glass was broken and the tracks filled with debris so I had to go to Plan B on that issue (more later).

Here is one photo that I did take, showing the window switch wiring and how it is attached to the window cassette (pinch the plastic clip to remove – just note how the wiring is routed and clipped to the window cassette) .



Here is a photo of Marv's passenger door (image flipped) showing the lack of wiring issues. (Thanks Marvin)



For those that notice details, you might have noticed that Marv's 92 UrS4 window regulator is bolted to the window cassette frame, whereas the regulator for my 98 C4 Avant is riveted into the window cassette frame. The change occurred sometime with the UrS6s. Doesn't matter - unless you are also replacing the window regulator.

Back to the plot:

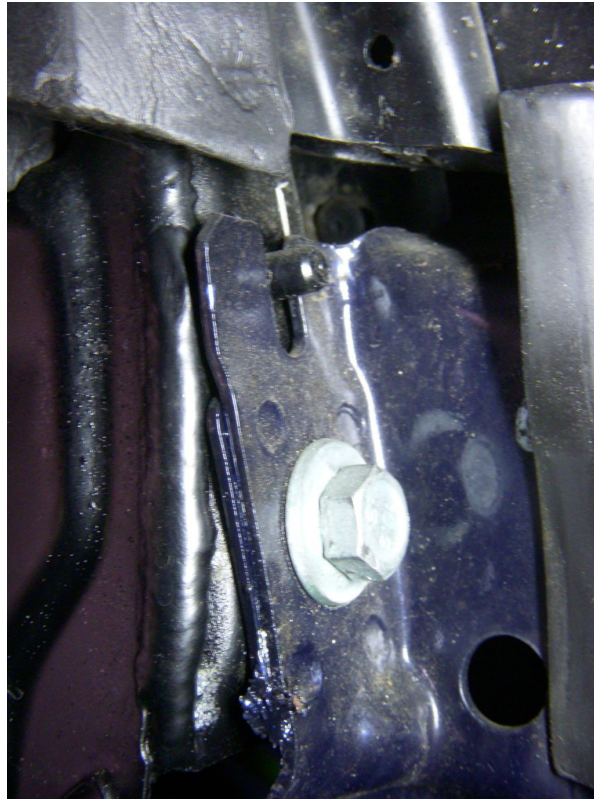
Marv's DIY (<http://forums.quattroworld.com/s4s6/messages/190258.phtml>) suggests noting the location of the washers, bolts and shims. This is very important. Before we get there, I will skip ahead and show you what you are going to be removing. This:



Yup. The window cassette is also the upper part of the door as well as holding the window and the window regulator and the mirror. It must be made of aluminum because even with the glass, it isn't that heavy. This photo was taken after I got out the old glass (a very tiny piece connected to the black plastic connector piece) and cleaned things up and put in the new glass. But this is skipping ahead. First we need to get the window cassette out of the car.

As Marvin H. said, note the location of the shim(s), bolts and washers (two bolts on each end of the door) before you start. Mark with masking tape or what have you, so you know for sure where the window cassette was located and bolted into the door shell.

One thing that Marv didn't mention is to note the height of the metal window cassette in the door. This can be done by noting and marking the location of the black window cassette guide pin in the guide slot in the front edge of the door as shown here (this one is about 1/3 of the way down the slot – note washer on the upper bolt):



Here is a photo of the lower bolt with a “peak-a-boo” view of the aluminum “U” shim (bottom, middle-right) and one of the electrical harness connectors that have to come off the window cassette before it can be removed from the car.

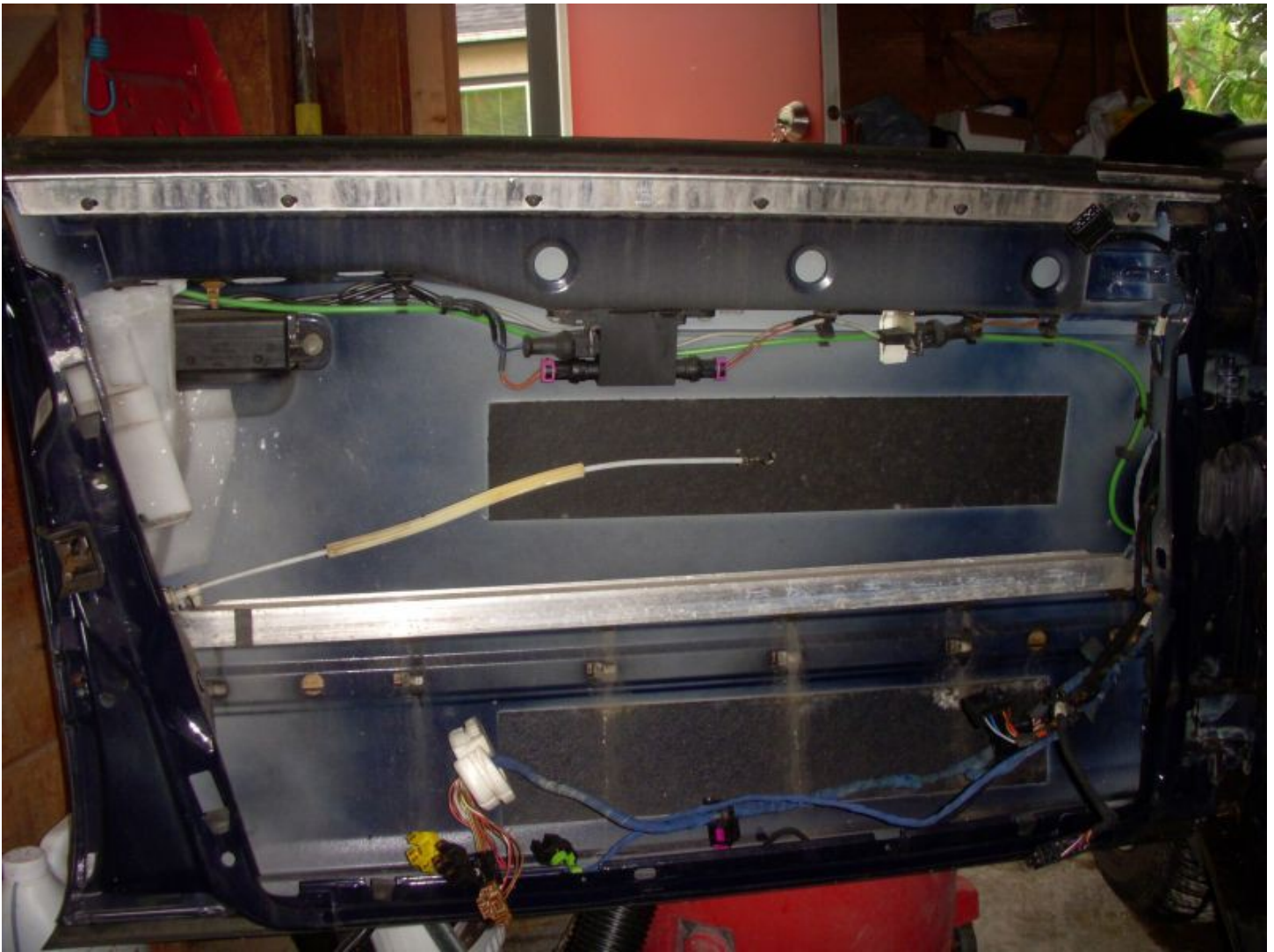


After marking the position of the bolts, guide pin(s) and shim(s) and removing all the electrical connectors from window cassette, remove the four bolts from the ends of the door (2 per end) and lift the window cassette out of the door, noting that you are lifting the window cassette over the door lock pin/rod (this will become important later). OOOoops – Gotcha!! There is one more electrical harness plug that has to be removed. It relates to the mirror and has to be removed from the brown connector shown in this photo (just underneath the mirror on the **outer side** of the window cassette – which is why I missed it until I was part way through lifting the window cassette out of the door –Urk!).



Once you have the window cassette free, place it down gently somewhere safe where you can work on it. I put in the back of the avant with the hatch open. A big table on a blanket would work too. Now go back to the door.

The door itself will now look empty except for a few electrical harness connectors, the aluminum side impact intrusion bar (that thing looks wimpy relative to an SUV, don't know why it is such a big DOT approval thing) and the lock mechanism, including the cable that was attached to the chrome door opening handle back at the beginning of the process and the green vacuum hose for the central locking system. Now is the time to vacuum the door out to remove broken glass and debris. Make sure that the drain holes are open so any moisture that does get into the door can simply drain out the bottom of the door. If you find rust starting, now is the time to deal with it via cleaning up the rust and painting on some "Rust Stop" of your choice. This is also a good time to lube the lock mechanism while it is easier to access from the back.



While you have the vacuum out, vacuum all the broken glass and debris out of the window cassette, paying close attention to the tracks in which the window guides run up and down.

To remove the broken glass from the window cassette, remove the rubber and /or foam plugs from the ends of the window guide tracks. Vacuum again as needed. Now you can remove the glass by removing the clip that holds the glass to the window regulator and sliding the window out of the two guide tracks.

The next photo shows the spring clip in question as well as a square white plastic positioning “washer”. The location of this washer is important during installation of the new window glass, so note exactly where it is and how its “teeth” mesh with the “teeth” on the window regulator.



The glass has some flex and can be lifted up and over the pin that square white positioning washer is around and the clip is over (once both are removed).

Again, make sure that the guide tracks are clean. I couldn't actually remove my window glass without first vacuuming out the guide tracks and the window cassette itself so there were no more glass shards/crumbs/bits to jam up the regulator and/or glass. Once I thought I had all the broken glass out, I took the window cassette back to the door, placed the door on a 5 gal plastic pail (Marv's trick, Thanks Marv) and reconnected the regulator motor and the black window switch. Then with the ignition on, I ran the window regulator down to the bottom of its travel. After disconnecting the window power and the switch, I carried the window cassette back to my work area (avant hatch cargo floor in my case) and removed the window glass (not much remained). More vacuuming in my case.

As I removed the window glass, I noted two white(ish) plastic slides that fit on the window guide pins which are part of the glass assembly. The rectangular slide goes on the guide pin for the track at trailing edge of the glass, the round slide goes on the guide pin for the leading edge of the glass (the mirror end track).

I vacuumed and swabbed out the two tracks again, then sprayed the tracks with silicone lubricant spray. Then I loosely installed the window glass in the tracks, at first without the white plastic slides, lifting the glass over the pin on the regulator and manually pushed the window up and pulled it down. I didn't like the effort needed so I removed the glass, swabbed out the guide tracks again, resprayed and tried the glass in the tracks again. Good enough. Seemed to work fine. Then I removed the glass enough to get the white plastic sliders on the guide pins and into the tracks. I have to

admit, I could not get the round plastic slider on the leading edge guide pin. Something was different between the 1998 glass and the replacement 1995 used glass. I did put the rectangular slider on the trailing edge guide pin and sprayed it with silicon. This time when I pushed the glass up into the guide tracks, I connected the glass to the pin on the window regulator, putting the white plastic positioning washer in the same location as the old glass and then adding the spring clip. I also sprayed the window regulator cable and cable track with white lithium grease at this point.

To be sure that the glass was going to go up and down without issue, I carried the window cassette back to the door (and the five gal pail) and reconnected the regulator motor and the window switch. Then, with the ignition turned to ON/RUN, I ran the window up and down a few times to make sure there were no issues. I left the window up but probably should have left it down. Then I disconnected the motor connector (again) and started the re-installation process), including installation of the plugs at the bottom of the two guide tracks.

Installation *is* the reverse of removal, with a few exceptions and/or points to be made:

1. The lock pin/rod
2. Window cassette positioning
3. The rubber and foam bits
4. Wires
5. Door handle cable
6. Memory Switch

The Lock Pin/rod – That bastard gave me nothing but grief. It fell out of the lock mechanism when I first removed the cassette and would not stay in place without tape on the reinstall. Then in a moment of mental lapse, when I was reconnecting the outer mirror connector into the brown plug, I inadvertently let the weight of the cassette (with glass now) rest on the rod (which at that time was inside the cassette). It sheared off at the lock mechanism. Bad news. Good news is I didn't have to try to get it through the door panel when that step came. I never used it anyway (rationalizing failure). ;>)

For the door to seal properly, you need to get the window cassette back to its original position. Since you took the time to note the location of the window cassette in its guide and location of the bolts, washers and shim(s), you should be fine. If not, you'll have to consult the Bentley or use trial and error to get it to shut and seal properly.

There are several rubber and foam bits that need to be reapplied in their original positions. These include the foam on the top of the door edge that the door panel sits on and the rubber bit at the leading edge of the window cassette, just forward of the mirror. It was designed to fit neatly so put it back properly if it got moved a bit.

The various wires need to go back to their original positions, held to the door by the various clips and cable ties. In one case, a brown clip/cable tie wouldn't perform properly for me on the reinstall. I just added a small zip-tie and accomplished what was needed.

The door handle cable has to be run through the window cassette and the insulation panel for it to work properly. That is why you took note or photos or consulted this (imperfect) guide.

The seat memory switch requires a bit of extra information. You will remember that during disassembly, you pulled the memory switch out and inadvertently disconnected the switch from its harness connector. No way that can be avoided.

By the same token, there is no way (in my opinion) to get the switch back into the harness connector in the door. This is what you are looking at:



Here is the memory switch, top side (BTW, for the red switch, down is ON and UP is OFF):

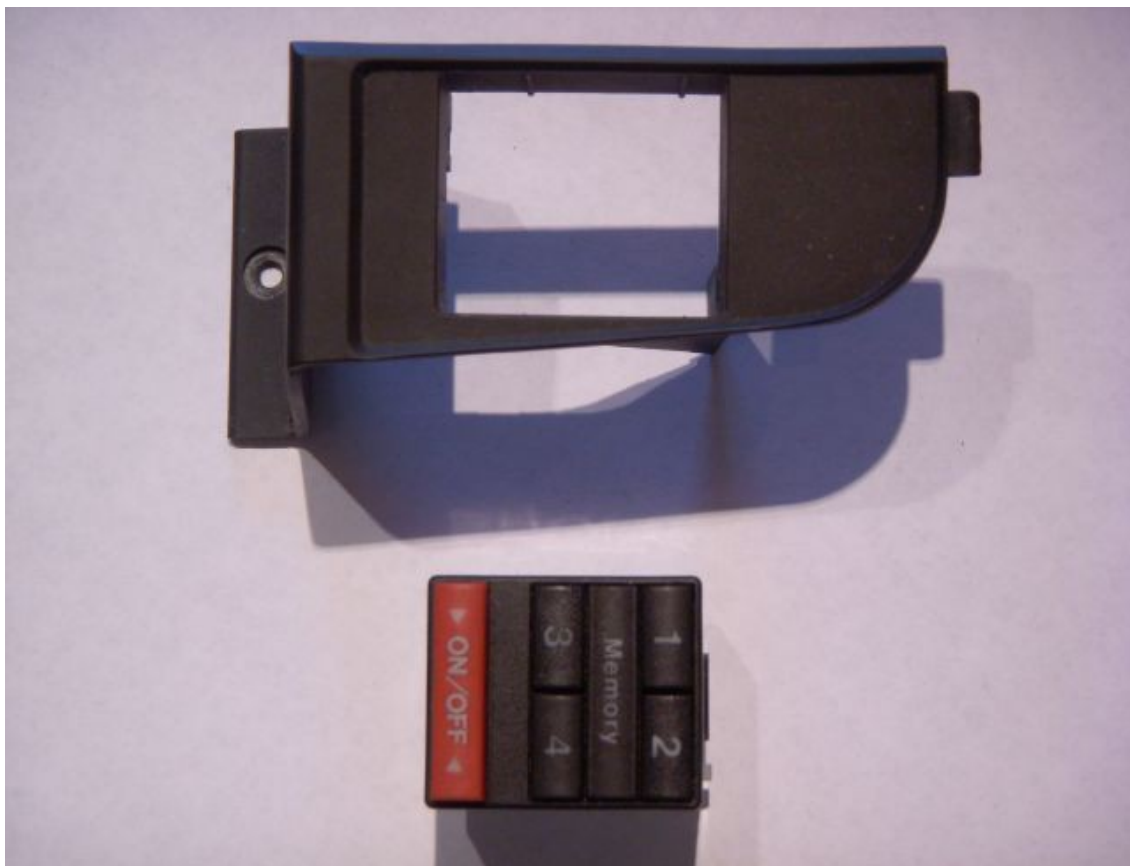


Flip it over to expose the mechanism that locks the switch into the switch panel surround:

To release the switch from the surround, pull the loops as shown and pull the switch out of the surround.



Now you have two parts, the surround and the switch (note the tang on the leading edge of the surround)



Take the switch and install it onto the harness plug in the door panel:



To get the surround in and over the switch, put the surround into the door pocket well aft of the switch (the surround is wider at the trailing end than the door pocket by the switch. Bring the surround down over the switch while at the same time getting the tang on the leading end of the surround into the slot under the edge of the door pocket and getting your fingers under the switch and pushing it up until you hear it click into the surround. Multiple attempts are possible but you will succeed, even if you have to completely remove the surround and switch and try again.

CONCLUSION:

Not a bad job to do. Even though I broke the lock pin/rod, I still think there was less breakage and more “cleanage” (vacuuming and swabbing) than would have happened with an auto glass company. A local UrS6 owner contacted me about the process because he just had his door glass replaced professionally. Somehow, they didn’t get his memory switch connected properly. He said it was fine in the door pocket so, most likely, there was an issue with the connector on the back of the door panel.

Thanks to Marvin H. for blazing the door glass DIY trail before me and for Jimmy P. for documenting the door panel removal process.

Hope this helps somebody in the future.

Dave F. June 10, 2013.