

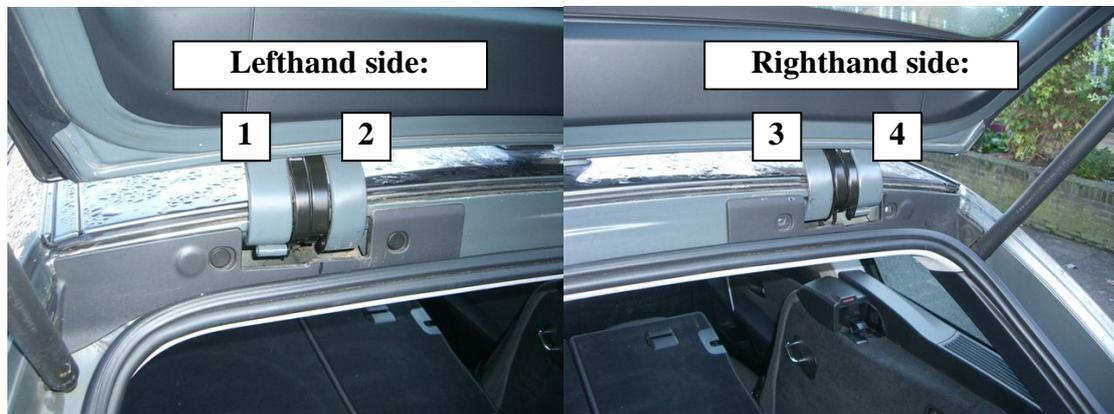
BMW E61 fixing tailgate wiring problems

>> **DISCLAIMER:** this manual is intended to explain what I did to fix the broken cables on my E61 (dec 2004). any repair you do is at your own risk. I will not accept any liability to possible damage you make yourself<<

My problems: I had (had!) an intermittent connection with the right license plate light. This brings up the annoying warning in your dashboard. I could have lived with that, if not the glass boot lid started to pop up automatically every now and then. This was the trigger for me to inspect the wires in the tailgate hinges.

My E61 started with these problems in the summer of 2009 at 140.000 kilometres, 5 years of age. The root cause of the shorts and bad contacts are the metal wire guides which (should) protect the wires from the chassis to the boot door. First of all, there is not enough space in these metal guides: the wires are really squeezed together. Secondly, I noted sharp edges within these guides which eventually cut the wires after some years of usage. Personally I decided to get rid of the two outmost covers completely.

From what I could tell this describes what hinge is for which function:



- 1 = rear window heating, water hose to the rear window washer, FM antenna
- 2= these wires go to the tail lights, fog lights, breaking lights, reverse lights, etc
- 3 = gsm/gps antenna cable, glass lid switch, middle breaking light
- 4 = at least: license plate lights (not sure about the rest)

The description is far from complete but it should give you an indication which hinge is the one you need fixing your problem. In the end you better check them all 4... chances are that other cables will break soon...

What I did to fix the problem with my intermittent right license plate light:

I opened the complete boot (not the glass lid, keep it closed for the moment), and removed the 3 plastic covers from the right hand side hinge by prying out the plastic plugs as shown here (use a wide flat screwdriver):



Now the cover is removed. Next step is to remove the plastic plug that holds the lower part of the rightmost wire guide:
I was not able to remove the plug in one piece, I had to cut it. I decided to buy new plugs and put these back later. Suggestions are welcome how to remove this plug in 1 piece ...



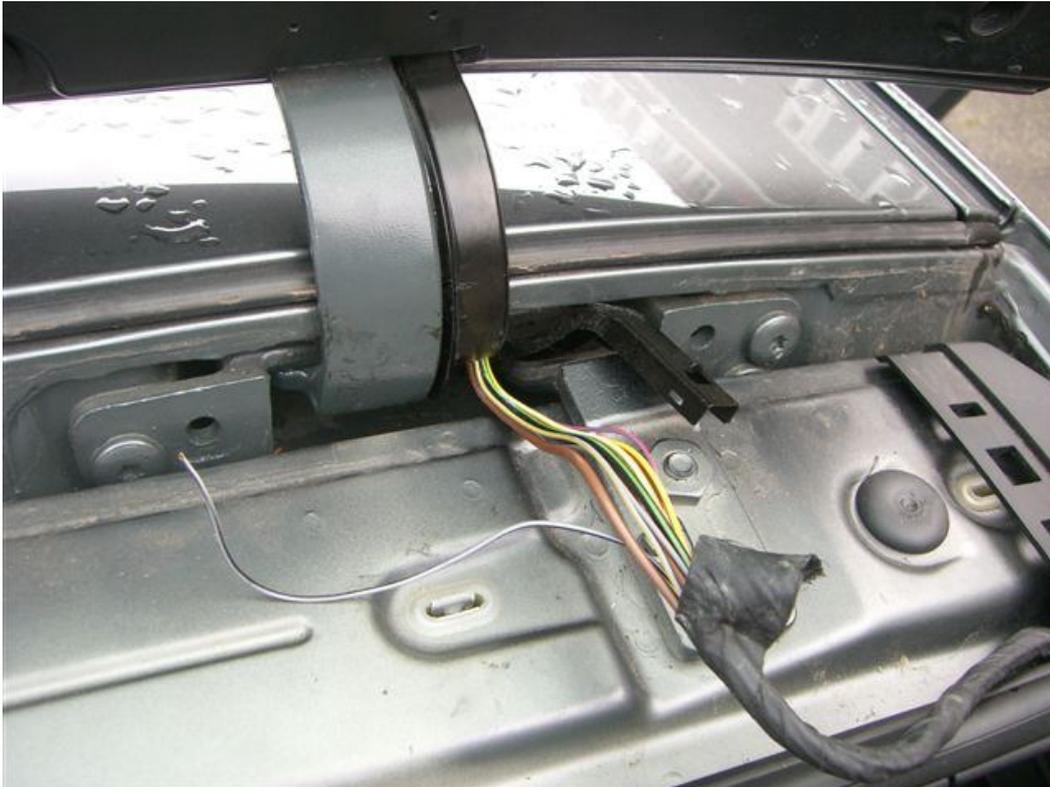
Now, close the boot and open the glass lid (I hope your glass lid switch is still working...). Now you see the upper side of the rightmost wire guide. Unscrew the metal cover with this screw:



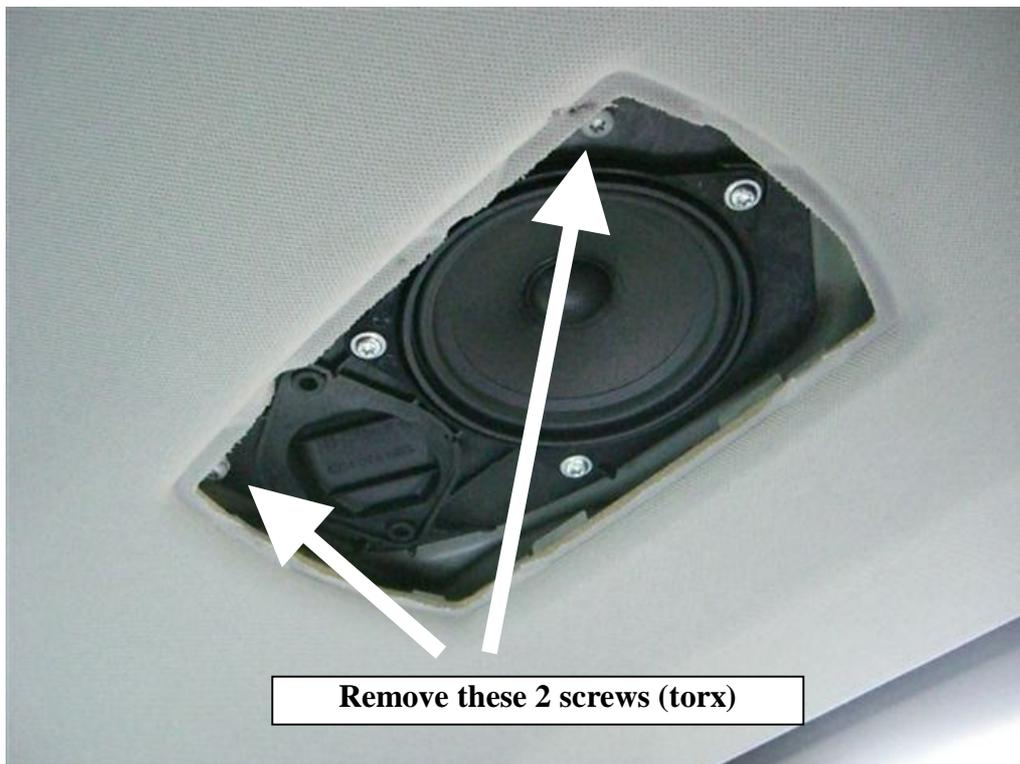
Open the metal guide with a flat screwdriver. Be careful with your fingers...



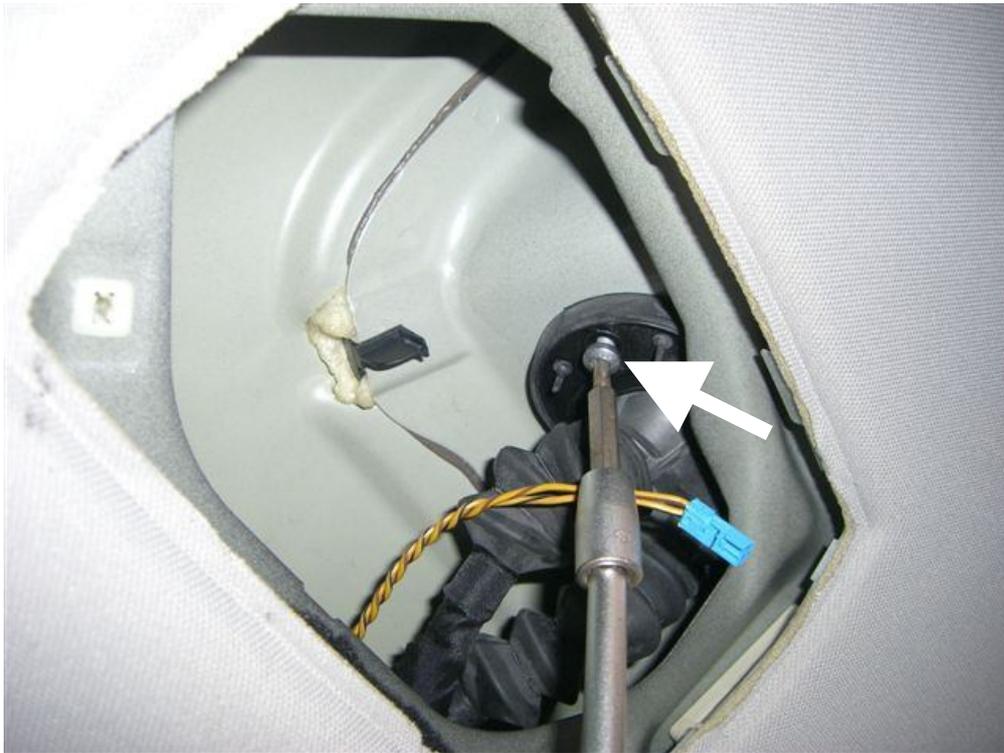
Now remove a bit of the black tape and here you see one of my problems: the grey/black cable was broken off completely, which runs to the right license plate light:



Now... go into the interior of your car (flatten the rear seats) and open the right hand side rear speaker which will expose the wires from the interior:



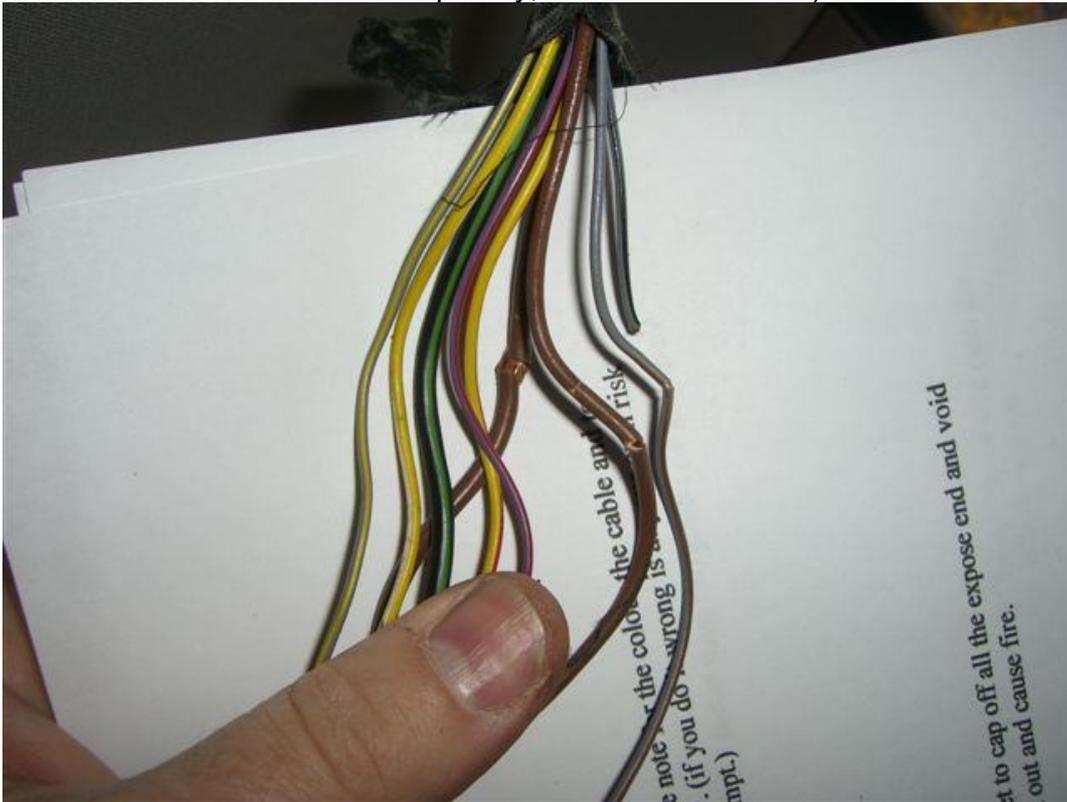
Remove the single screw (torx) which holds the cableloom in place:
From here you can retire the cables later...



I then went back to the outside and cut all 9 wires, but I isolated them before I retired them from the interior:



Now I retired all the cables from the interior and voila: 4 cables had a problem! (1 came off completely, 3 had a severe cut):



Next I cut all the wires in the interior and extended them with new wires. Then I re-inserted them back through the loudspeaker cave towards outside, put a shrink wrap around all wires and resoldered them back:



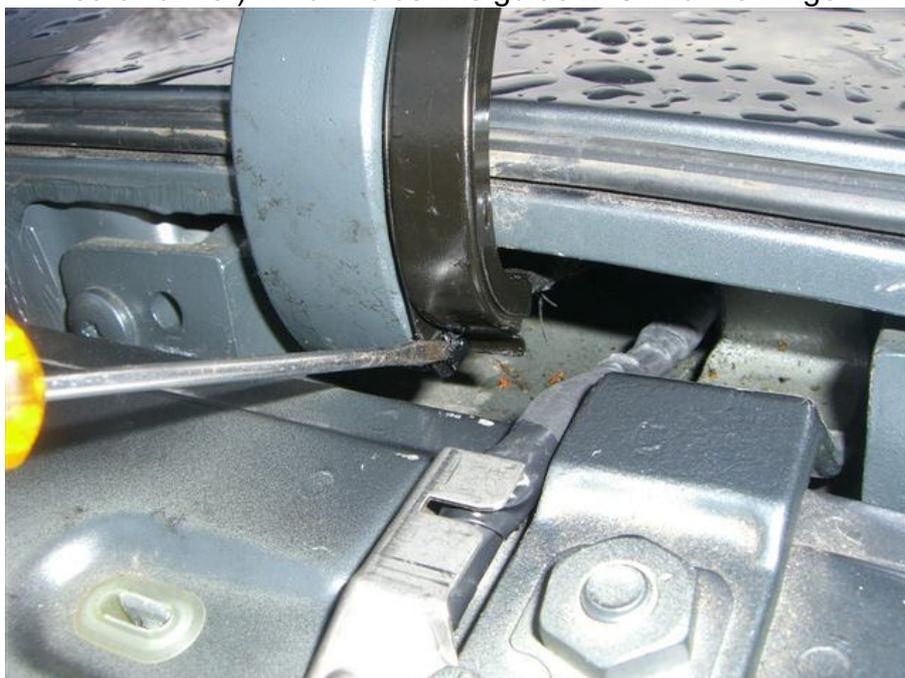
Finally I decided to not use the metal guide again, but instead I shrink wrapped all 9 wires together like this:



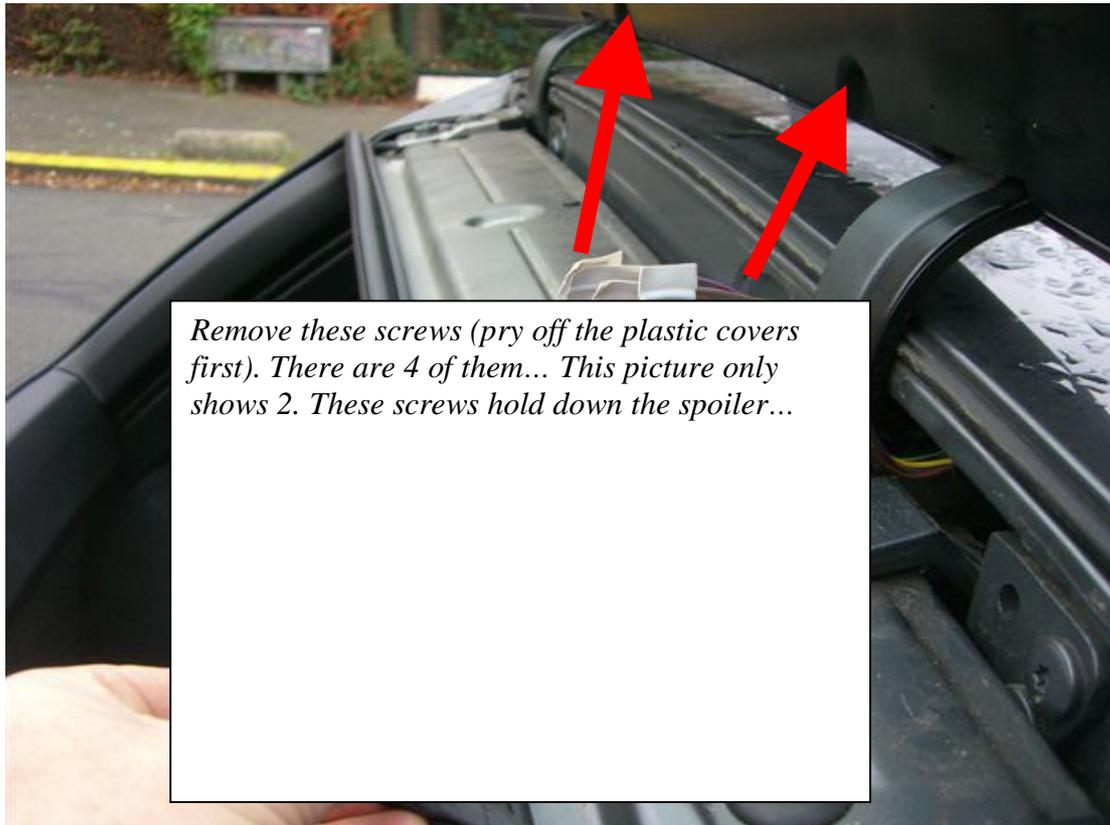
The reason why I did not put back the metal guide is that I had no more plastic plugs to hold the guides into the hinges. When I find the time I will surely do that. But for now everything works....

Except for: the !@(*&@\$!! **glass boot switch** ! To fix that problem, I needed to uncover the guide next to the one I fixed above (nr 3 in my first picture).

To do that, I opened the glass lid again and removed the plastic plug (with a flat screwdriver) which holds this guide nr.3 into the hinge:



Next I removed the spoiler by unscrewing these (4) screws. I forgot to take a separate picture for this, but check the red arrows here:



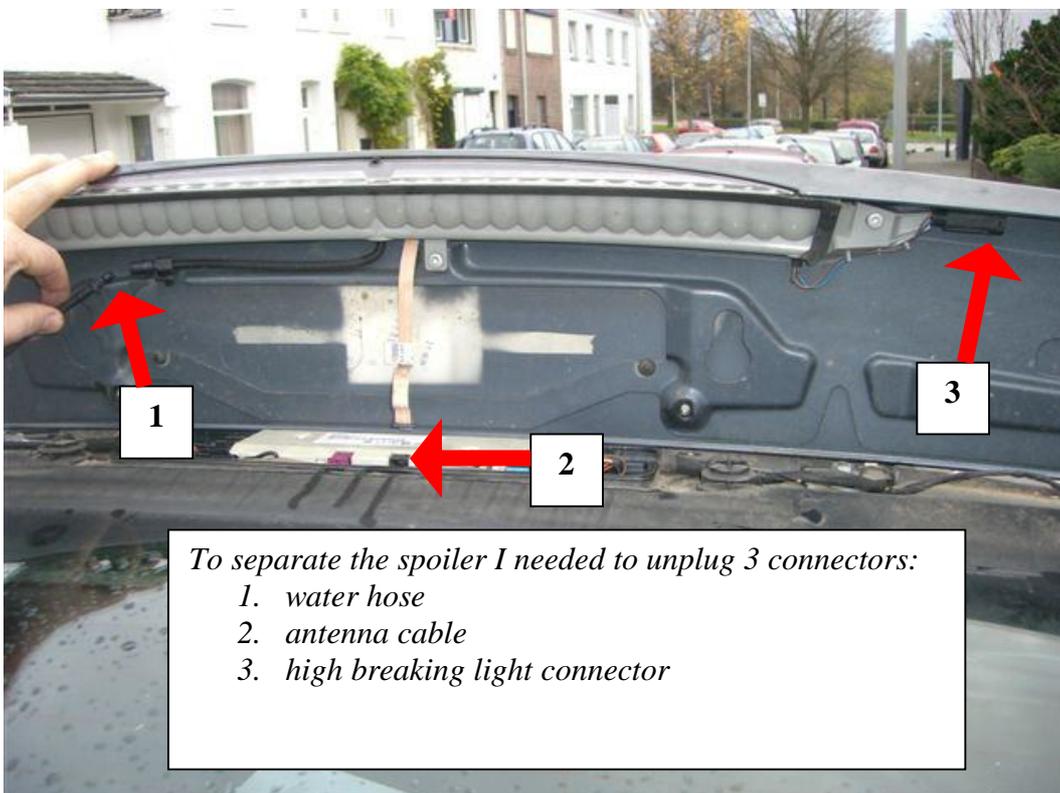
Keeping the glass lid horizontal, I was now able to remove the spoiler by pulling it gently towards me. I opened the spoiler carefully, and opened the black cover of the radio receiver module. In the middle there is an antenna cable still connected:



I removed this antenna cable, and on the right hand side I unplugged the high breaking light connector:



Finally I also removed the water hose that supplies the rear window washer:

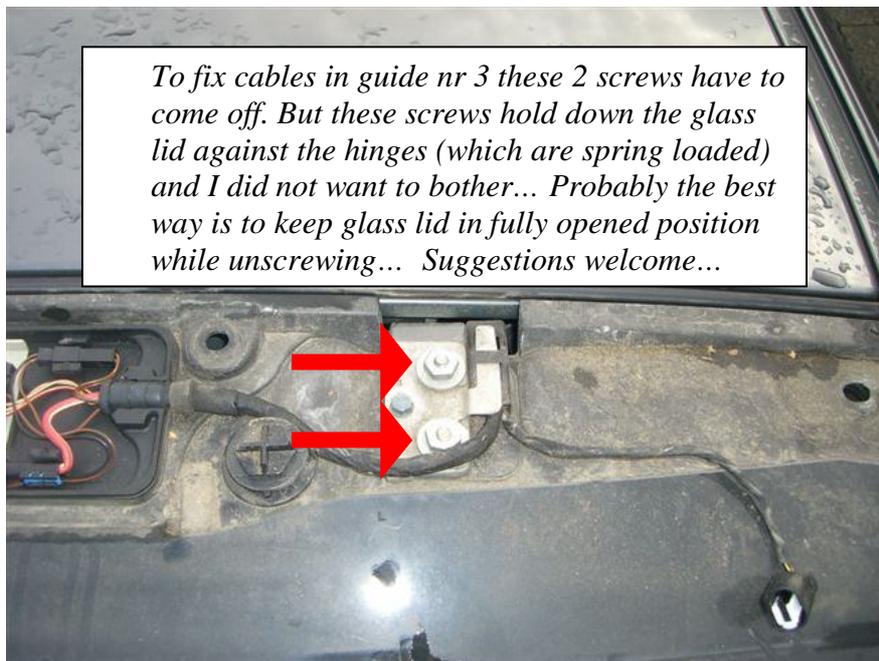


And here is the connector which goes to the glass lid switch:



This is where my story ends, because I simply decided to unplug this connector. I rarely use the glass lid, so hopefully this should now fix my intermittent problem (lid opened itself regularly).

It is still possible that guide nr. 3 is causing a shortcircuit which triggers this glass lid switch. If that is the case, I have to open the guide nr 3. but this includes loosening the next 2 screws which I did not want to do yet:



I hope this guide explained a bit how I fixed my wiring problems. And I also hope that BMW engineers do a better job designing these wire guides.... hgulikers@home.nl