Updating standard Cayenne and Cayenne `S' front bumper with bumper from GTS/Turbo

You will need:

Torx screwdivers/wrench set (all screws are torx head but there are 2 different sizes)

Flat-head screwdriver (for easing out the electrical connectors)

Soldering iron and electrical connectors

Electrical cable

Electrical insulating tape

Time taken:

2 full days (less with help)

Some steps are actually simpler than you think, while others were a surprise but not a big problem. The biggest thing I discovered is that you do not need to remove the pdc detectors or front side lights from the bumper before removing it from the car. All of these items connect to the inside of the front bumper via the front wiring loom and once you have unplugged the two main connectors, this loom and all its fittings can be removed with the bumper. Once the bumper is off you can then take the loom and electrical fittings off. In any case, this is the order in which I did the conversion. Remember to write down each step as you do it so you don't forget anything when re-assembling:

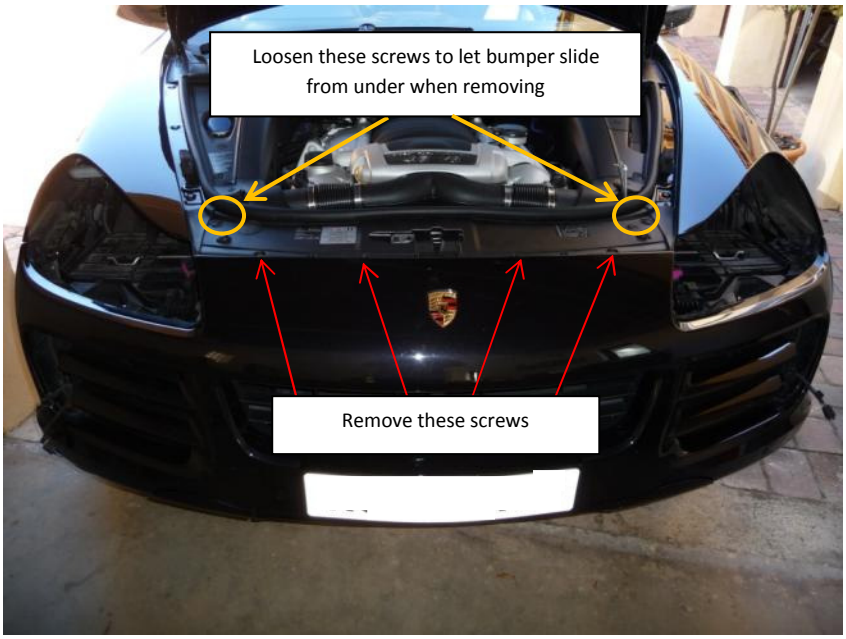
1. Remove both the front headlights, following instructions in owner's manual





2. Unbolt bumper. It's held on at the top, underside and through both of the front wheelarches

- The top screws are found under the leading edge of the bonnet and are simple to remove. The top edge of the bumper actually fits underneath a cover panel here so I also loosened the two screws on each side holding that panel in place so that the bumper would be able to slide out easily from underneath



- Remove screws from underneath the bumper. This is also simple - just work your way along the lower edge of the bumper. 2 are shown below but there are a lot more!

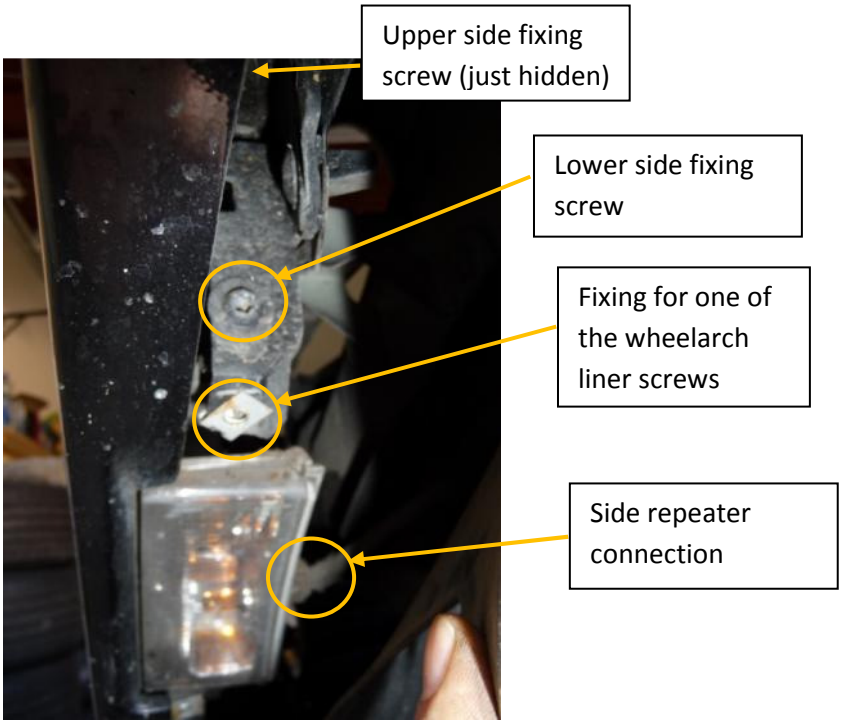
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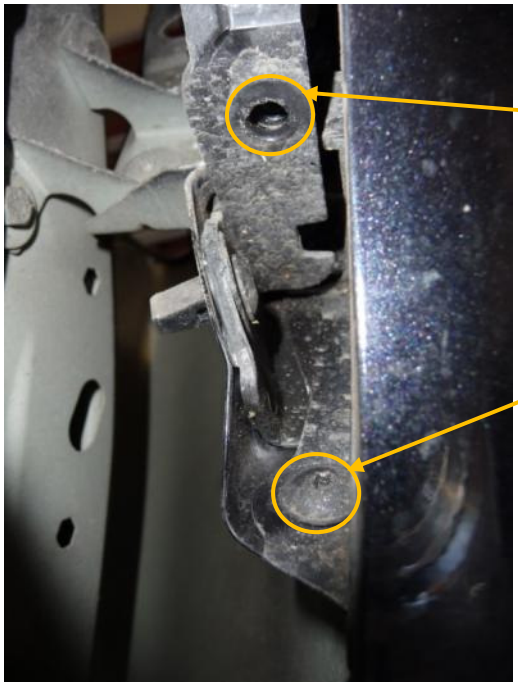


- NOTE: be careful as there are two screws hidden, one in each underside air duct. They are easy to access from underneath once you know where they are



- Remove the side screws and the side repeater connections on each side. First you need to get access to them by pulling back the front wheelarch liners. On each side, undo the 5 screws holding the front edge of the liners in place and gently pull it back.
- You will be able to see the cable and bulb holder. Simply pull this out.
- The 2 side fixing screws are located above each side repeater unit. Remove these two screws from both sides

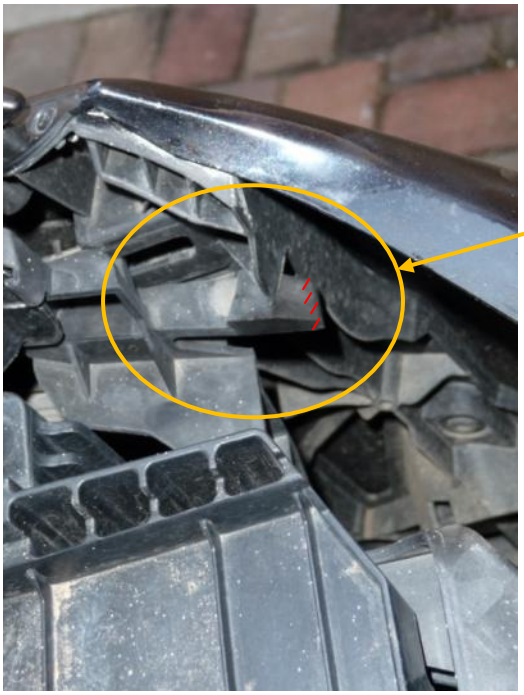




- On right-hand-drive cars the front wiring loom for the bumper fittings (park distance sensors, front fog lights and front daytime lights and front indicators) attaches to the main loom through a pair of connectors located on the inside of the front bumper on the driver's side. You can access the connectors by simply pulling back the wheelarch liner on the drivers side, as you did for removing the two fixing screws. Both connectors work in a similar way to those holding on the headlights so are simple to undo. Undo both of these connectors.



- Now that all the screws have been removed, the bumper can be removed by sliding it forward. It is not particularly heavy but it is awkward and can flex. I actually managed to do this on my own but placed a few boxes underneath incase I dropped it. My suggestion if doing it again would be to get two friends to help – one on each side taking the weight as you stand in the middle and pull gently.
  NOTE: There are two clips (one on each side) easily accessible through the headlight opening that you need to push down to allow the bumper to slide forward.



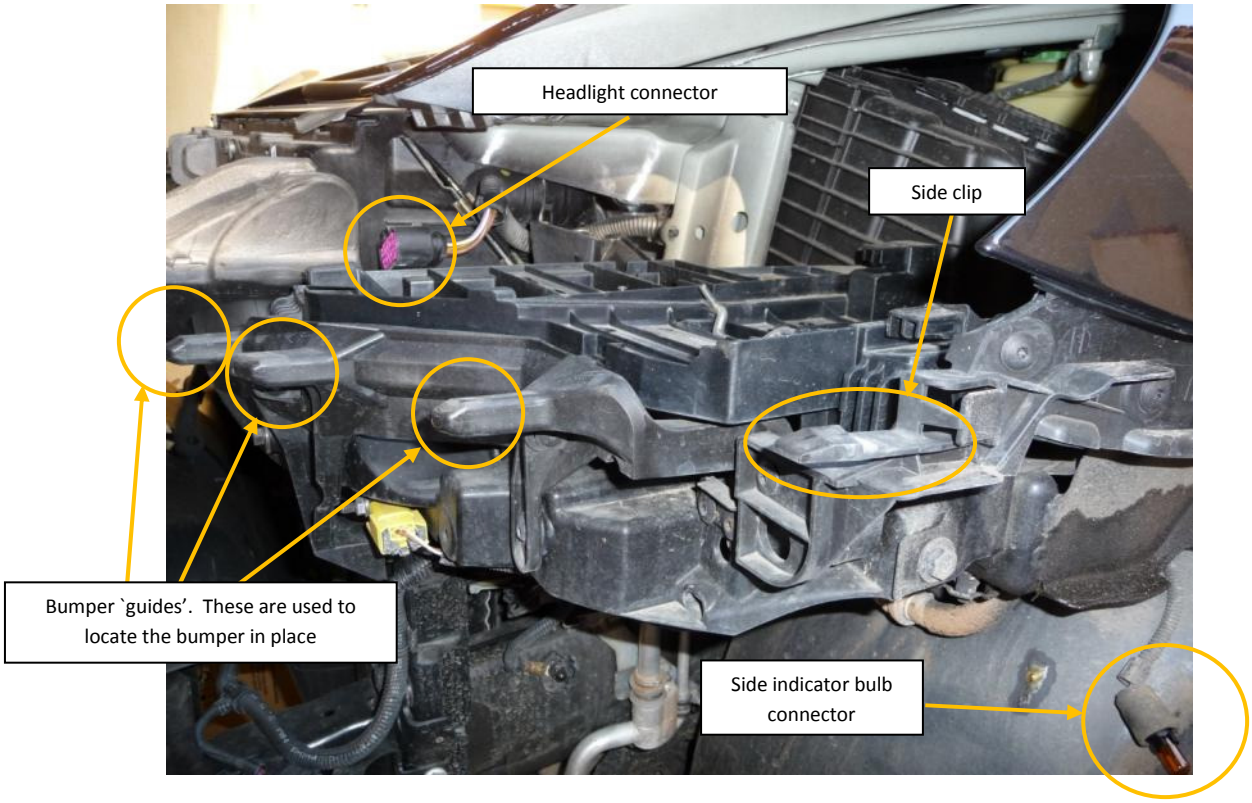
Side clip (shown with bumper having been slid out slightly). Push down on end (marked in picture with red hatching) as you slide the bumper forwards so they unclip

- Having undone the side clips if you find the the bumper still doesn't side forward evenly then you may have missed a screw – this was how I found out about the two hidden screws in the underneath air channels! Remove bumper and set it down on something soft

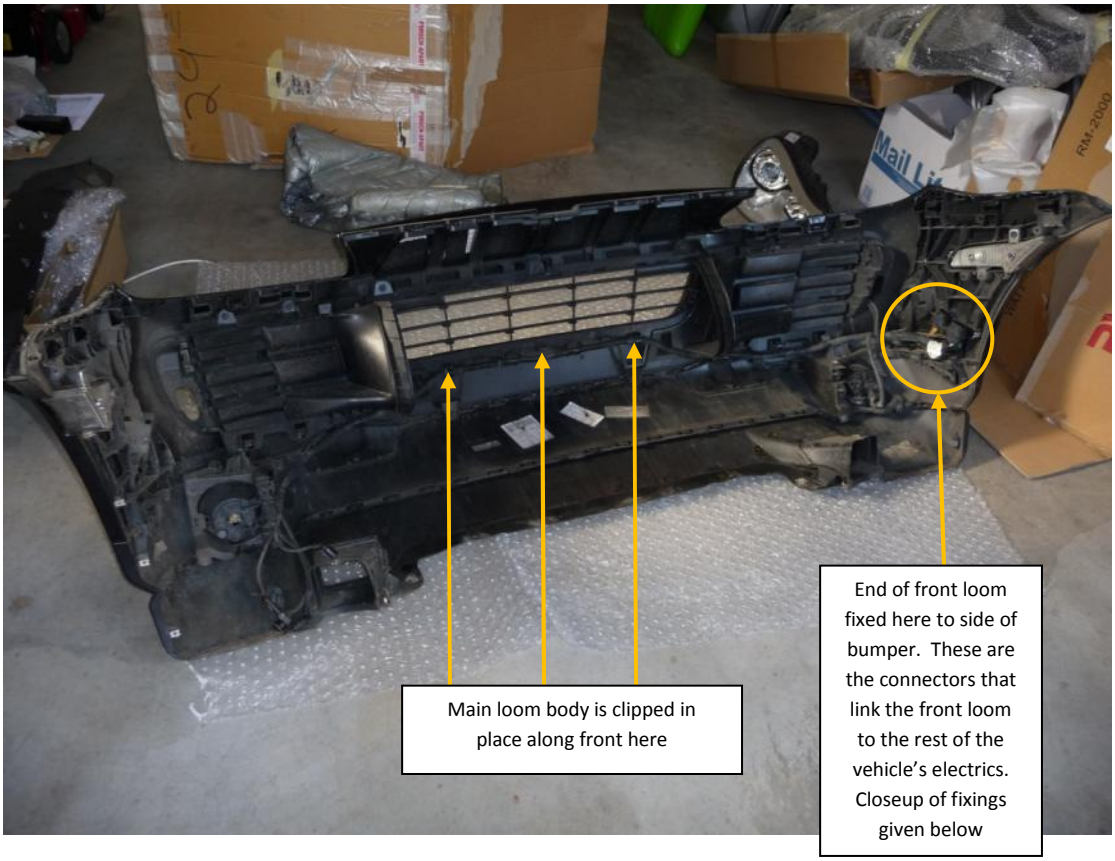




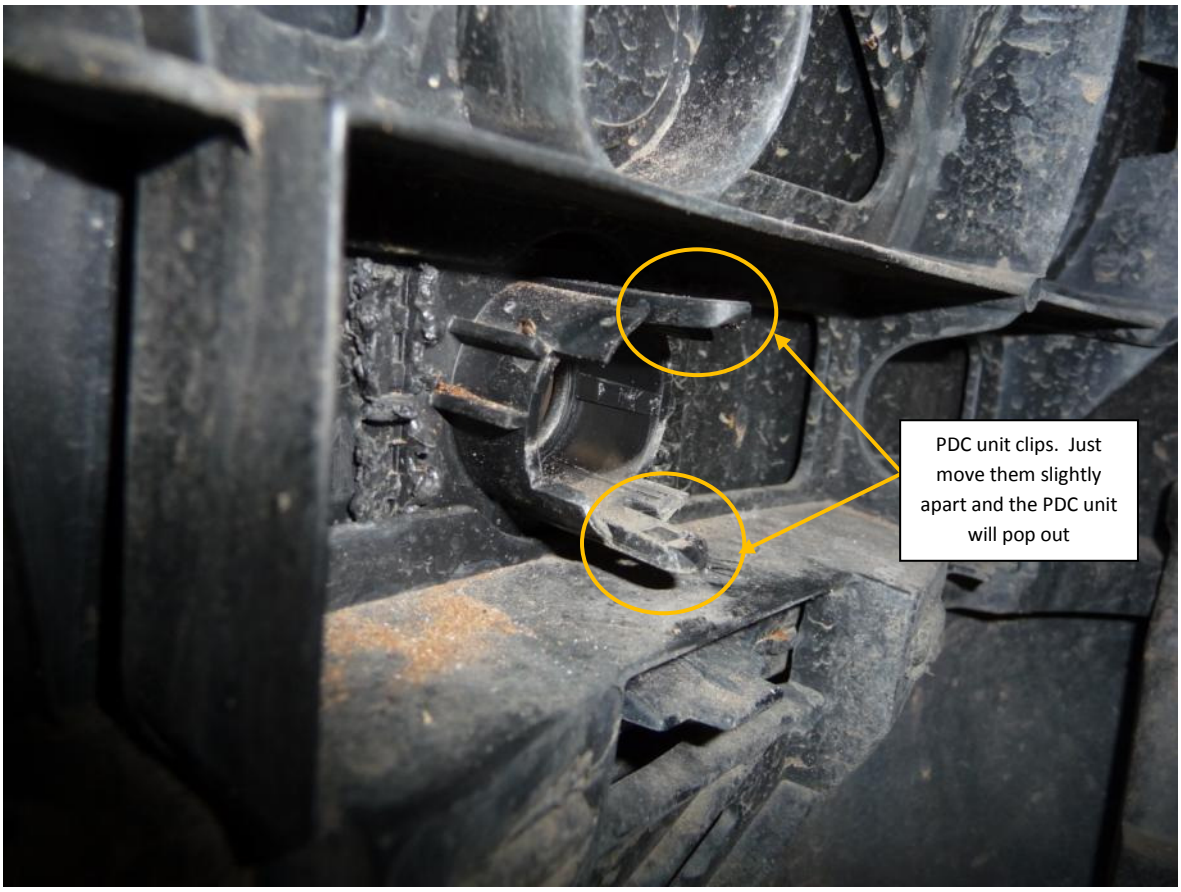
(Side View with bumper removed)

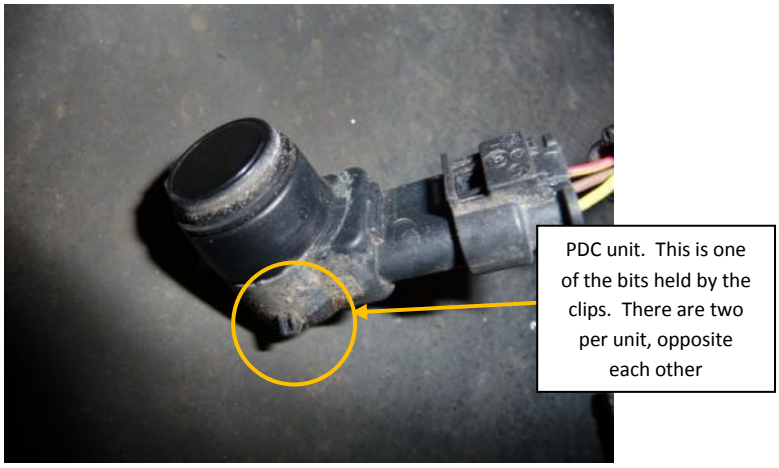


(Inside of old bumper)

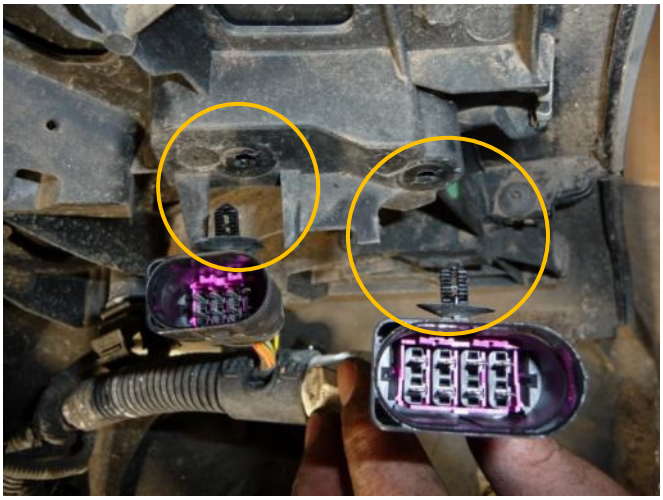


3. Remove electrical fittings from the old bumper that need transplanting into the new bumper, principally the front wiring loom. This can look scary but is very simple - just be patient and methodical.
   - First unplug front fog lamp connections. I actually removed the lamp units as well as it made access to the front park distance control units easier. The fog lamps units are just held on with 4 screws
   - Second, undo each of the 6 park distance units. These are fixed to the inside of the bumper with simple clips so for each one move the clips apart and the unit will pop out. BEFORE YOU REMOVE ANY OF THE UNITS, MAKE SURE YOU MAKE A PICTURE AND TAG EACH UNIT WITH ITS LOCATION IN THE BUMPER. I USED MASKING TAPE WITH THE UNIT LOCATION WRITTEN ON IT. GET THIS WRONG AND YOUR PDC WILL NOT KNOW RIGHT FROM LEFT!



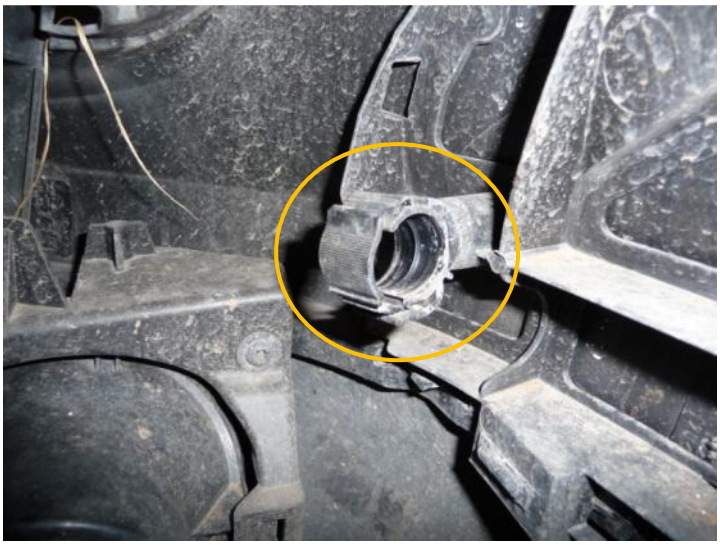


- Disconnect the daytime running lights and front indicators. There are two connectors for each unit.
- Remove the wiring loom. It is held in place with simple clips across the front of the bumper. On the driver's side (on right hand drive cars) you will see that the connectors are fixed in place to the bumper. The fixings are simple push-in items so take a flat head screwdriver and gently lever each out.





Next to the connector fixings there is also a bracket that supports the loom wires (see picture below). The new bumper did not come with this item so I had to remove it from the old bumper and transplant it to the new. It is also a push-fitting so a flat-head screwdriver will free it.

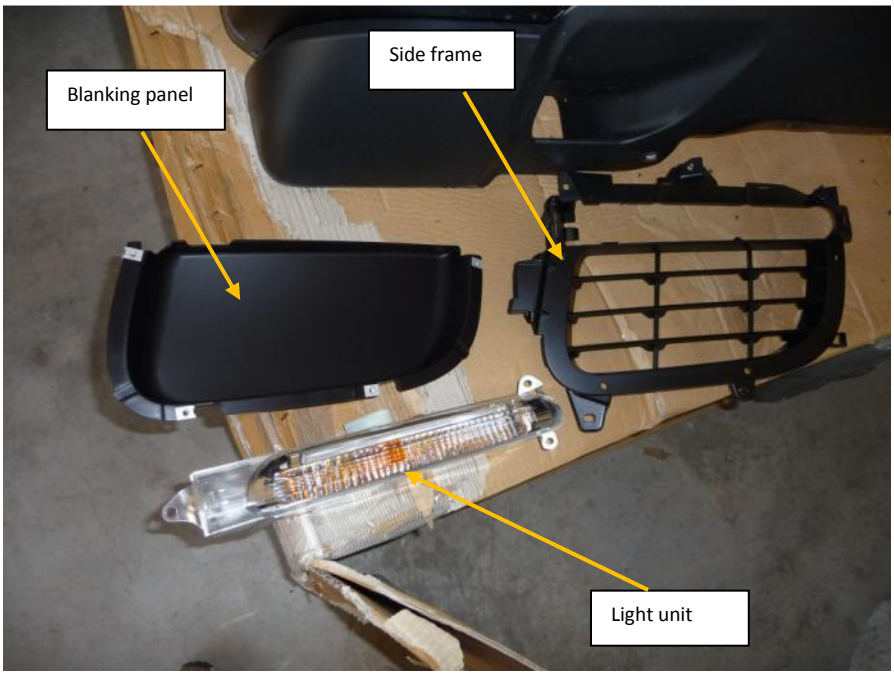


- The front loom will now lift straight off the bumper



4. Preparation and assembly of new bumper

The new bumper I purchased came from a turbo. In the turbo the side openings feed air to additional radiators but in the GTS model (and therefore in mine) the two side openings are blanked off as these extra radiators are not present. I had to buy these blanking panels along with the light units (indicator and daytime running lights) that sit in the side openings. These two items screw onto a side frame which then itself then screws onto the bumper along with the central grille.



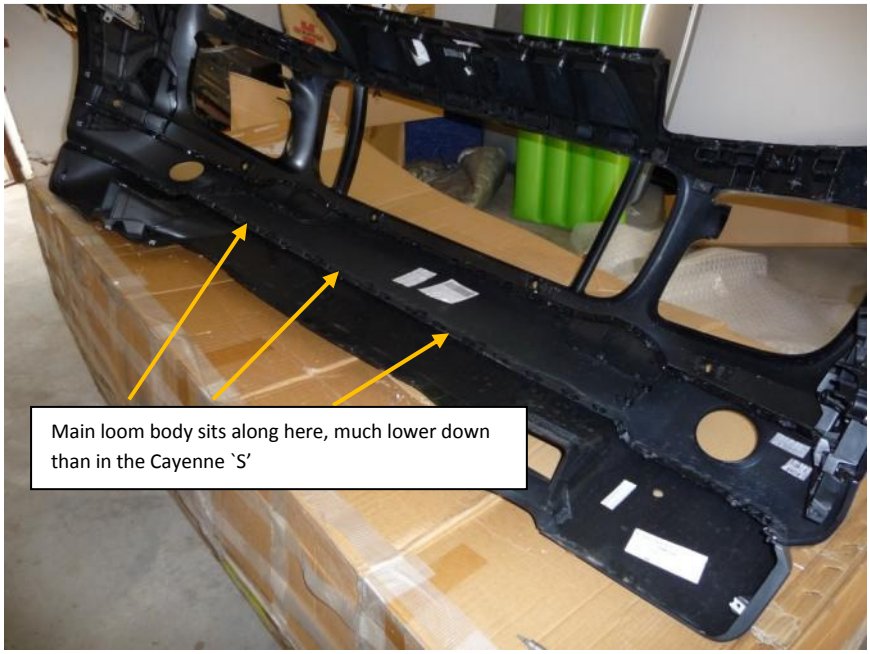
Assembled side unit (front)



Assembled side unit (back)



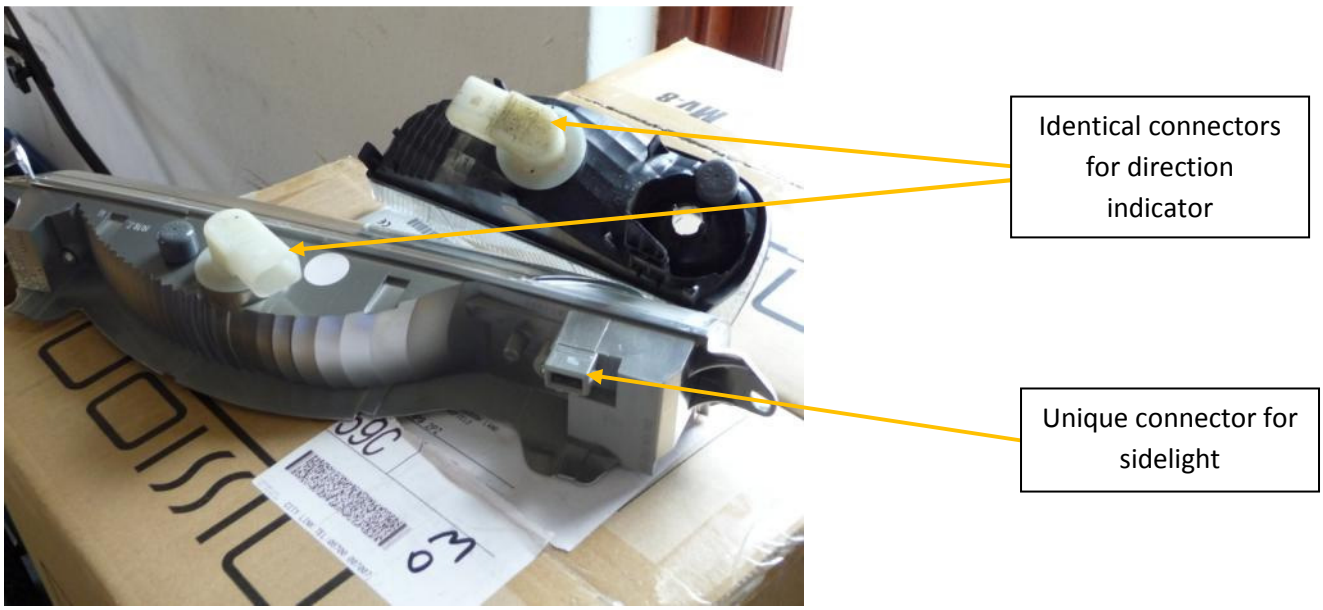
The new bumper has a particular order of assembly. First the side units should be fixed to the bumper, then the central grille. The wiring loom goes in next and lastly the fog lights are fitted.



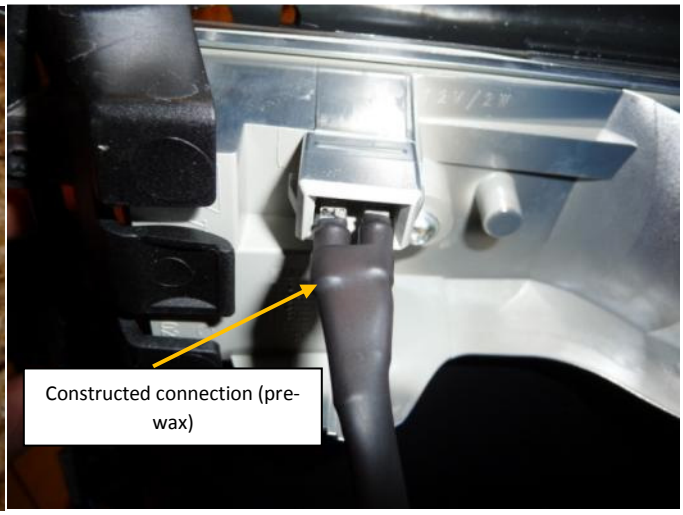
Before starting the assembly process I had to adapt a few pieces of wiring, specifically:

- the front wiring loom needed some of the links to be extended for i) the new sidelight connections ii) the two corner pdc units (not the side ones but the next ones in, which sit above the foglights) and iii) the indicator connections. This is because in the GTS/Turbo the main loom body itself sits lower down in the bumper (because of the bigger central grille) and the standard cable length for some items will not stretch far enough and need to be lengthened. I guess you could buy a new GTS front loom to sort this but the work is very straightforward for anyone who has done some basic soldering. Each of these links required an extension of around 12 inches
- Connectors. The new sidelight units each have two connectors, one for the sidelights themselves and one for the direction indicators. The indicator bulb connectors are exactly the same as in the Cayenne and cayenne `S' models so aside from making sure the wiring is long enough, there is nothing else needed for these

- However, the sidelight connectors themselves are unique to the GTS/Turbo model and Porsche does not sell the connector block on its own. Again, buying a new GTS front loom would sort this but instead I sourced some suitable pin connectors and built my own.
- NOTE: check polarity of the sidelight connections. The lights will only work if wired the correct way round. To ensure the sidelight connection remained watertight, once assembled, I filled the space around the pins with molten wax from a regular household candle. The sidelights take exactly the same feed as the old units – there is no need to modify anything apart from the connection itself. There will be no `bulb blown' lights in the driver information system.



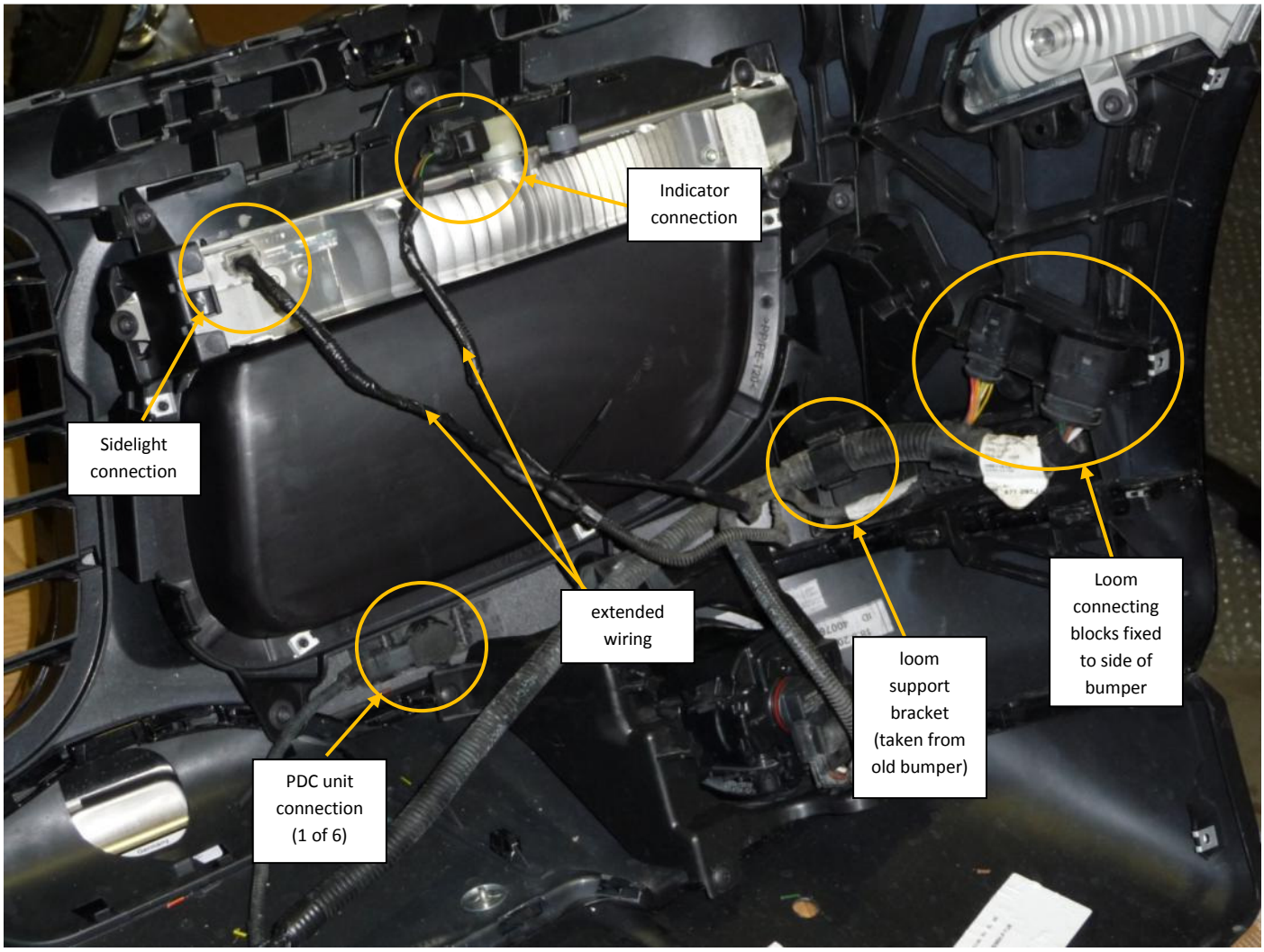




- Install the two side units in front bumper with torx screws

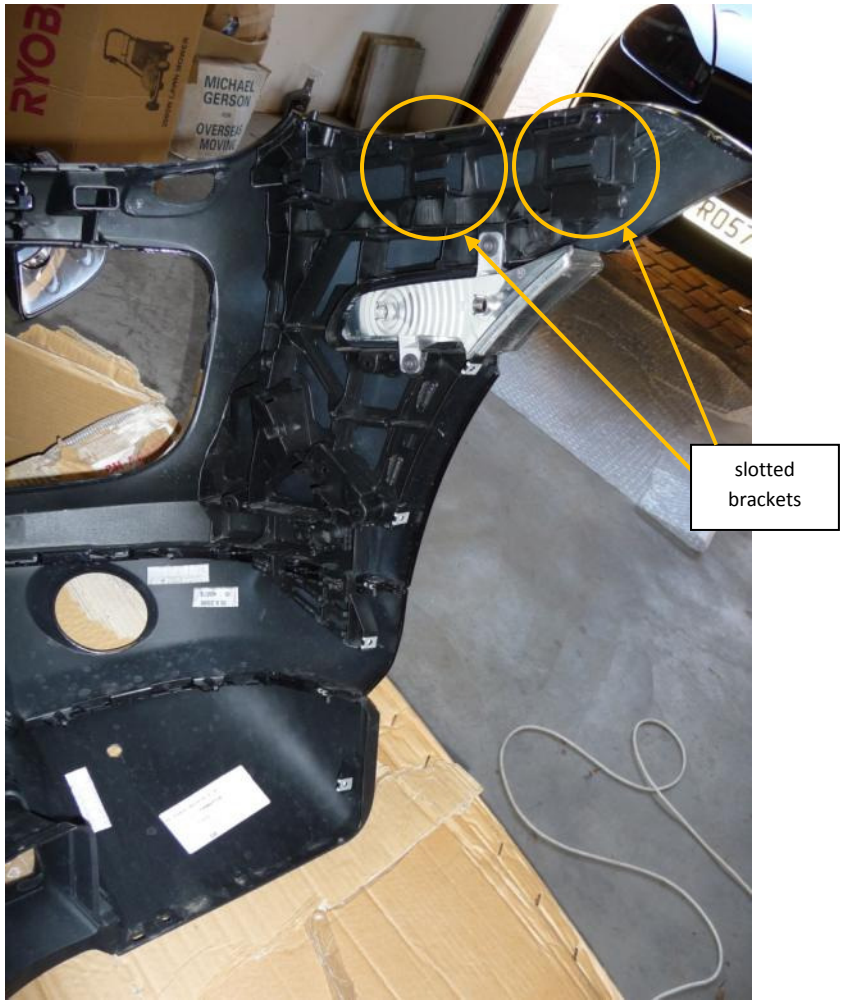


- install central grille, also with torx screws
- install extended front loom. Connect pdc units first (simple clip into place, ensuring correct order) then fix the main loom body to the bumper using clips provided. Connect links to the sidelights and direction indicators and lastly fix the loom connecting blocks to the inside of the bumper using the press fittings taken from the old bumper



5. Install New Bumper

- not much to say except have some friends around to help! Again, I actually managed to do this on my own but it was a real pain and frankly I could easily have damaged the bumper or the side bodywork.
- the bumper has a couple of slotted brackets on each side above the side indicators. There are fixing points on the vehicle on either side which slot into these brackets. The bumper has to be pushed in slightly on each side when fitting in order for the points to meet the brackets



- Once the bumper is in place, reconnect the two front wiring loom connectors inside the driver's side wheelarch and basically reverse the steps you took when unscrewing the old unit (this is why you keep a list of the steps you take.
- My vehicle did not have the xenon light option and so I have two holes where the headlight wash system fits (it is standard on the turbo). The caps are on order and will be fitted next week.
- the picture below shows the (almost) finished article. Aside from teh caps, the only other thing missing are the wheelarch extension pieces that sit on the front bumper but these have since been moved from the old bumper to the new.
- the steel guard shown was fitted to the new bumper while it was off the car. I will document this fitting (identical for turbo and non-turbo bumpers) once I've had a breather – it is a simple DIY job itself but does require the bumper to be removed.

