**Headrests retrofit for the pre-LCI E60**

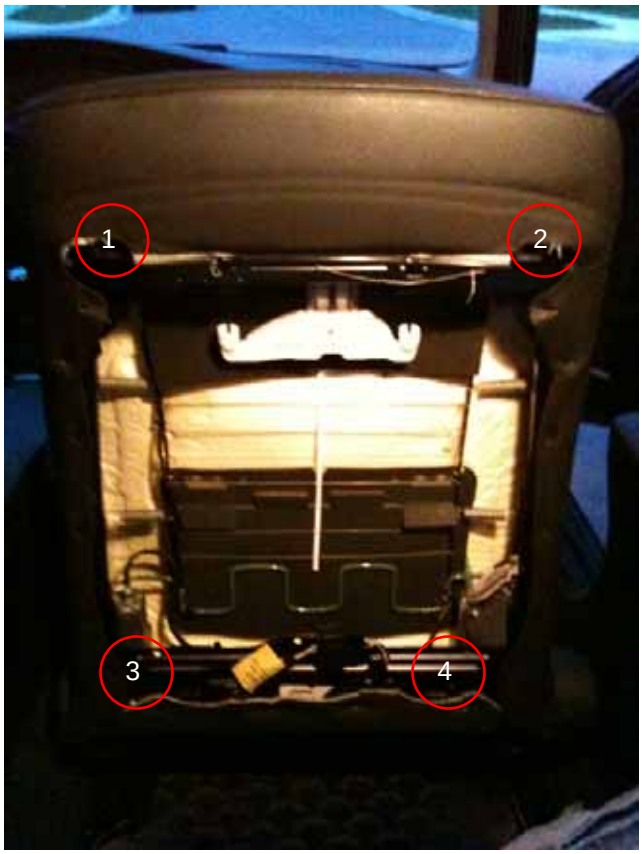
One thing I didn't like since day one I owned this car was the lack of head support in the front seats. Compared to the E39 headrests that have a wide range of front/back adjustment (these are the only other ones I can speak of myself but there may be other models), the E60 engineers probably thought the headrests are not needed during the "driving experience".

I'm aware that others posted already this DIY however I hope this one will provide few more details for the ones interested in modifying their seats.


These are the multi-function headrests I ordered from Schmiedmann, don't know about other places, but here in Canada-Toronto area, the dealer wanted double the price I was quoted by these guys.

I ordered the non-electrical version of the headrests because the seats they will go in don't come with the controls to adjust their "wings" and also, this adjustment is not that important to me to make me research a solution to implement this adjustment.

**Removing the seat back panel**




The back panel is fasten to the seat in 4 points, (1) and (2) are the only ones that you need to worry about because they are very hard to remove, (3) and (4) just hook to the metal frame and are very easy to remove.

This is how # (2) looks like; the small notch is the one that holds it in place. # (1) is exactly the same, only rotated 180 degrees so that the notches face each other.

1) move the back portion of the seat to its most vertical position
2) from the backseat, hold the back panel with both hands by sliding your fingers between the leather and the back panel at the top corners
3) first try and move the back panel left-right but don't pull, just try and loosen it a bit, you need some force here, you will hear some crack noises while you are doing this as the metal clamps are moving into the plastic clips.
4) you can't remove #(1) and (2) at the same time without breaking them from the actual panel (ask me how I know) so let's say you want to remove #(2) first, you will need to push the back panel to the right as much as possible before you pull out (towards you) ONLY with your right hand while the left hand is still keeping pressure towards right.
5) after one of the top clamps is free, push in the opposite direction (towards the clamp is still attached to the seat) and it should come out easily.
6) after both top clamps are free, move up the panel to release its bottom clamps.

Note: keep the back panel as close as possible to the seat while is partially unlocked from one (or both) of the top clamps, otherwise the bottom clamps may get bent.

**Removing the headrests**

This is how the headrest is fixed to the vertical adjustment mechanism, both ends lock into the plastic support.
I removed the headrest after I removed the back panel because I wanted to see what effect has the pulling force (while removing the headrest) to the adjusting mechanism.

1) adjust the headrest to its most vertical position

2) grab both rods at their lowest point (where they stick out of the seat) and use the base of the seat as support while twisting you wrists up (towards the roof); try to apply the same force to both hands, the headrest should pop-out of the plastic support relatively easy.

**Removing the top plate**

**Fig 1**

**Fig 2**

**Fig 3**

In Fig 1, the top plate is on the right and base plate on the left side in this picture. Fig 2 is the base plate, the side that is facing the top plate. They bind together by these circular teeth, they look like a thread but it's not.

I don't think it's possible to take the plates apart after they are joined, in fact I did a small experiment to see if it's possible. I only connected them by the first teeth and I had to cut it down (fig 3) so at this point I decided to cut the top plate instead of trying to force it out. Interesting fact, the old base plate is the same with the new one, if careful cut, it can be reused.

**Fig 1**

**Fig 2**

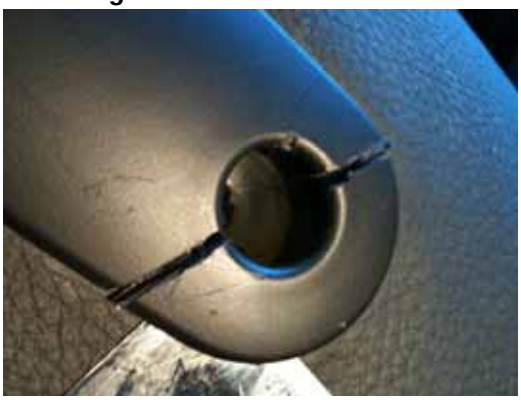


**Fig 3**

1) Use your imagination and try to protect the leather at "all costs" !!!; I used what you see in fig 1.
2) I didn't use any power tools for this step, a regular hand saw goes quickly through the plastic
3) make two opposite cuts at each hole and easy take out each piece (fig 2), the end result is fig 3

Note: if you find the need to hold the base plate while you pull the top plate, you may want to slip your hand underneath the leather, see next section on how to achieve that.

**Loosen the leather**

The leather is kept stretched by few hooks along its edge, start with the two top ones (these are in fact metal clamps) and move down on both sides of the seat, three or four hooks would be enough. Use one hand and push back the leather around the seat to release the pressure.
I also tried to push the entire top portion of the seat towards the steering wheel to expose the metal frame but the leather was too tight around the corners so I had to slip my hands under the leather to do all the work required to remove the base plate and the two guides (see next steps).

In the picture I show the plastic guides sitting at the top of the seat, don't worry about them; their removal is done later.

**Removing the base plate**

The base plate sits under the leather so you will have to gently slip your hands under the leather and reach this plate, it is fairly easy especially for small hands.

**Removing the plastic guides**

**Fig 1**

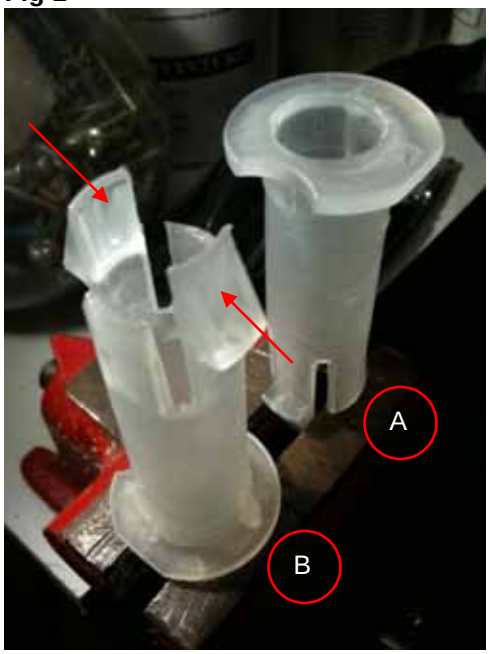



**Fig 2**

It was really hard to remove them because I didn't know the easy way… I found the best solution while I was installing the second-last guide so take a look at fig 2… you get it?? This is why the german engineers designed that notch and I killed myself removing them the hard way, both hands under the leather, turning 90 degrees the guide from its axle position..etc. Details: the guide is kept in the metal frame by two horizontal metal plates each drilled with 20mm diameter. In fig 1, "A" is its correct vertical position as it sits in the seat. "B" shows the bottom extrusions that keep the guide in place. So to remove the guide you need to reach it with one hand from under the backseat (along the mechanical adjustment) and push it up at the same time you push in the two extrusions (see arrows). Now instead of doing what I did and force them out thorough the

back, between the support-foam and the metal frame, try and push them all the way up though the whole. The leather will not let them out but use that notch in the guide and rotate it, I could easily push it in so you should be able to take it out.

**Modifying the guides (power tools allowed:)**

I didn't attach a picture of the new guides, they are black, they fit the new headrests but they are shorter with no extrusions to keep them in place so I decided to reuse the old guides. The old guides need small modifications to be able to be reused.

**Fig 1**

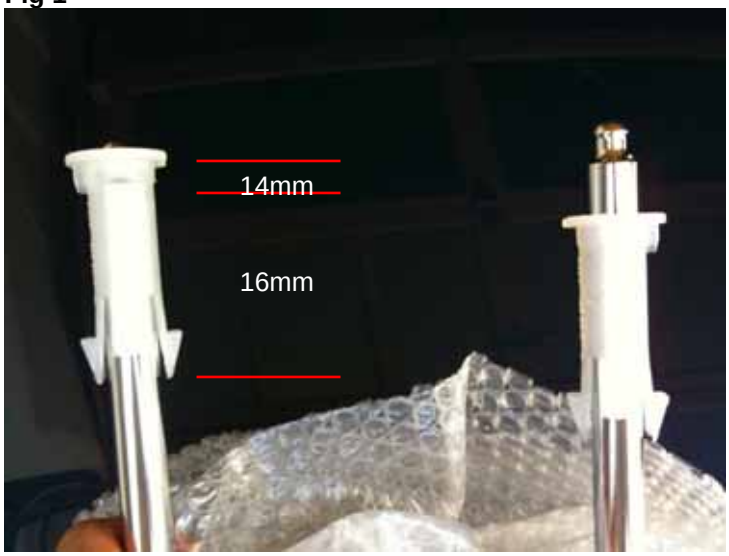
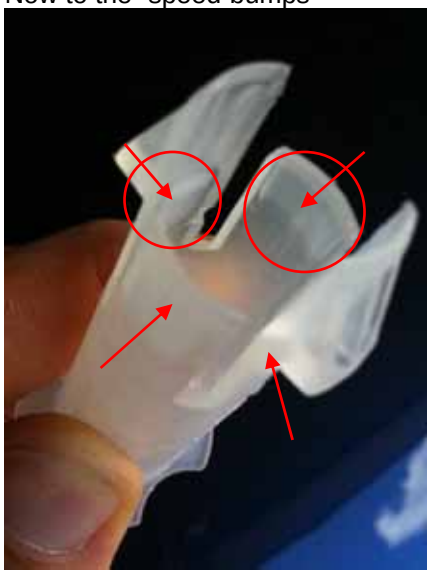



**Fig 2**

In fig 1 the left rod holds the guide not modified, the right rod holds the modified one.
1) The rods from the old headrests are 14mm in diameter; the new ones are 16mm but the 14mm is only a small section at the top of the guide.
2) drill a 20mm hole; if you don't have the right drill bit, use a smaller diameter one and move it in a circular way around the hole to enlarge it.
Caution: do not push the drill bit more then half way through the guide, you don't want to catch the extrusions at the other end with your bit (ask me how I know)…

Now to the "speed-bumps"



3) You need to file the small protrusions (aka. speed-bumps), there are four on each guide, use power tools at your discretion. If you are using the a rotary tool as in the picture, alternate its rotation for better results, also apply some continuous force at slow-medium speed, the plastic will heat-up and the bumps will come off faster.
Caution: do not use the drill bit use in the step above, really not a good idea, trust me.

The goal here is to achieve a 19.5 - 20mm diameter when measured as per the picture below otherwise the rod will not go thorough the guide when the guide is in place.

That's it folks, now your are ready to install the new headrests. You do this by following the instructions to remove the stuff in reverse order but here are the steps:
1) insert the guides, remember the "technique" to rotate them through the top of the seat. Make sure they sit properly in the metal frame.
2) Test the new headrests before you install the "irremovable" top & base plates. Fit the headrests through the guides, they should slide easy, don't lock them in the adjusting mechanism, just make sure everything is in order.
3) insert the base plate. Note that the base plate (in case you forgot) goes in between the material (looks cotton) that is next to the leather and the foam… not between the foam and the metal frame!!
4) install the top plate; I used one hand from underneath the leather and one hand from the top, the first thread is hard to catch, after that use both hands on top of the top plate and push down, you will hear clicks confirming the base plate grabs the top plate (with no coming back I should add:)
5) visually inspect everything through the holes and from underneath and install the headrest. The rods will click as they lock into the adjusting mechanism. Test the movement of the headrest.
6) clip back the leather
7) one more visual inspection and now the cover. Move the seat to its most vertical position. Clip the bottom first and then the top.

Now you are ready to test/enjoy the new headrest…not !!!!!!!!!!

Next page will reveal the "facts"…

Not the best picture but please notice that although the new one is wider, the rods of the old one are bent forward in such way that there is almost no frontal gain. The rods of the old one  I'm 178cm tall, normal build and definitely not square-ish head and the new headrest is providing just a tiny little more support than the old one. The angle at which I need to tilt my head back is not a driving stance… more like a big-screen and popcorn one so at this point I am thinking how many movies I could have seen for the money spent on this retrofit.. well.. I starred for 3 hours at the headrests, slept one night on this and found two solutions.

Firstly I could disconnect the front section from where is connected in the middle, leave the two arms that keep its wings in place and add some sort of padding wrapped in the leather from the old headsets to fill the gap between the extended pad and the main part of the headrest. This will bring the front surface about 5cm (2") and based on my measurements, would be perfect. But how this will look like?!

Secondly, I could add some padding to the existing front section. This will not give me more than 2.5cm (1") but it will not be as intrusive as the first solution so I decided to go with this one first and see how it will feel.

**Add padding to the multifunctional headrest**

In case in confusing, the left image has the front piece removed and resting on the two rods. The right picture shows the same parts in the same positions only this time I flipped the front piece so show its back.
You only need a small flat head screwdriver. There are 4 small tabs that keep the each of the two plastic pads (A & B) connected to the front piece. Start with the exterior tab, then top and bottom then the inner one.


The second row left picture shows the small tab that keeps the wing-rod in place. The last picture shows the staples I removed to add the padding.

The end result, I hope you can tell which one is already modified.