

## Reupholstering Seats in 1974 Mercedes 450SL (R107)

rao 7-4-2017

Before starting: You have more space to work if the roof is removed from the car. The job took me about 1 full day's work for each of the 2 seats. You will need:

- Replacement skins for the seats
- Padding material (I used 2" thick "Nufoam", a polyester fiber batting, instead of foam rubber)
- Good wrenches, including a #4 Phillips and an 8mm Allen wrench, with an impact driver to overcome Loctite in the screw threads
- Hog rings and hog ring pliers
- Space to work (I used the garage floor, with towels to keep things clean when working with the new skins)
- A helper will be handy, but I did this without any help



1. Remove screws at rear end of adjuster rack. (Driver's seat shown, two slotted screws on each side. On the passenger's seat, without height adjuster, there is one 13mm hex bolt head and one #4 Phillips flat head screw on each side)



2. Remove the outboard seat belt anchor from the side of the seat. This requires a 17mm open end wrench. Note there are 2 spacer rings on this bolt, only one of which is shown in this photo. Don't lose them. On the inboard side, the seat belt buckle stays with the seat; don't bother trying to remove it.





3. Remove the bolts from the front end of the adjuster racks. These need a 13mm hex socket; the one on the transmission tunnel side will need an extension on the ratchet.



4. Once all of the bolts are out, lift the seat out of the car and take it to your working area. It may take a little wrestling to get it out (and even more to get it back in later). Note that the height adjuster cams are loose at the rear end of the racks; don't lose them. Note also: there are wires from the seat belt buckle and the butt-sensor switch in the seat; in my car these had already been attached, but you will probably have to unplug them to get the seat out.



5. Remove the chrome trim covers from the seat hinges. These originally were attached with push-in friction studs and would pull straight off; at this age, though, you may find Velcro, silicone glue or duct tape holding them on. One of these covers is retained by the back angle adjuster knob; more on that later.





6. The center cap of the adjuster knob pries off – there are little notches around the edges to insert a small screwdriver. Work around the edge until it comes loose and lift it out.



7. Under the cap you'll find a 3-lobed steel bayonet flange. Use a long nose plier as shown to rotate this steel flange counterclockwise to release the knob.



8. Slide the adjuster racks off to the rear (note my foot is pressing the adjuster release lever)





9. Remove the nylon glides from the seat supports. NOTE:
  - a. On the OUTBOARD SIDE ONLY, the BOTTOM glides are wider than the Top glides
  - b. On BOTH SIDES, ONE ONLY of the narrower glides has a rubber spacer pad inside its mounting slot. This glide goes to the FRONT, on the TOP side.
  - c. These are white nylon under the layers of old black grease. Clean them with solvent. Nylon is very resistant to solvents, you can use whatever works – I used brake cleaner.



10. Use an 8mm male hex (Allen) wrench to remove the two pivot bolts that attach the backrest to the seat bottom. These are M10 bolts secured with Blue LocTite, they will need a bit of force to remove.



11. Remove springs from seat adjuster. This is MUCH easier to do after the racks have been removed, as you can relax the springs beyond their normal operating range.





12. Remove Tinnerman clips on both sides of frame to release adjuster lever assembly.



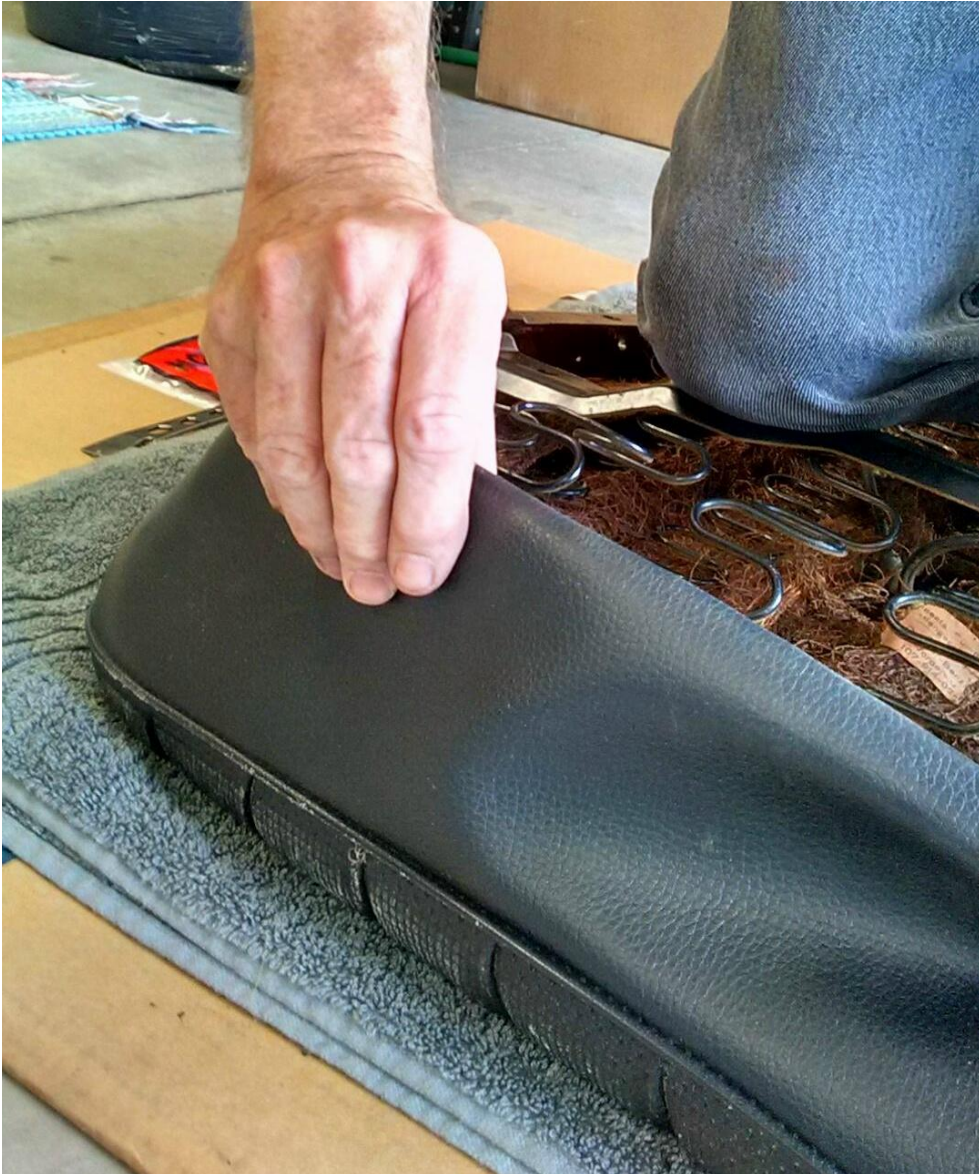


13. Remove adjuster lever from seat. (there are 2 main parts, plus one separate stud and the two Tinnerman clips)



14. Now for the fun part! You need to compress the seat springs in order to release the vinyl cover from the frame. The easiest way to do this is to invert the seat on the floor and kneel on it, using your weight to compress the springs. You may want knee pads for this.





15. Sorry I don't have a better photo of this, it's hard to do this and take a selfie at the same time. The edge of the cover is tucked into a groove around the perimeter of the frame. Pressing down with all your weight to compress the seat springs, pry the edge of the cover out of the groove until you have it free across the front and down both sides.





16. Here's what it looks like after you've pried it free from the seat frame. There are still some hog rings holding the rear edge onto the frame.



17. Cut or pry off all of the hog rings (they used at least 3 at every location that needed one) at the rear edge. Also note the steel rod inserted in the hem at the rear edge: save that, you'll need to use it with your new cover. Also note what appears to be staples holding the cover at the sides ... pull those out too.





18. Here's what it looks like with the cover completely detached. On my seat, it now just peeled off. However, if yours is not as badly rotted away as mine was, you may find that the cover is actually sewn to the horsehair pad, which is hog-ringed to the springs; if so, you may have to cut it loose before you can peel it off.





19. The seatback latch bolts come off easily. Just loosen the lock nuts with a pair of pliers, after that you can unscrew them with your fingers.



20. Now the cover peeled away from the pad, except for a small amount of fabric at the front edge that was still intact – I cut that away with a utility knife. The white strips are the butt-sensor switches; you can use those with your new cover if you like, I just threw them away. Their cord passes through a hole in the horsehair pad.





21. Next step is to remove the horsehair pad from the spring. In my case it just came away, but it had originally been attached with hog rings; if yours is less rotted you may have to remove those to get it off. I used this pad as a template, tracing around it with a marking pen onto the Nufoam material that I was going to cut to replace it.



22. Cutting the new pad. These are some serious heavy duty scissors, nothing less will cut this stuff. I was told that an electric bread knife would work well but I don't have one so I went with the scissors. Fine for one car, I wouldn't want to do this 8 hours a day.



23. The new skin goes on the same way that the old one came off, with the seat inverted and using your weight to compress the springs so you can get the edge of the cover inserted into the slots. The last step is the hog rings at the rear edge (but one decent quality hog ring is enough at each attachment location, rather than a cluster of flimsy little ones like the original had). And I used hog rings instead of staples at the rear sides.





24. The new cover doesn't have holes for the bolts, etc., so you'll have to cut those after you have it attached to the frame. Not a very artistic job of it here, but it gets covered up in the end.

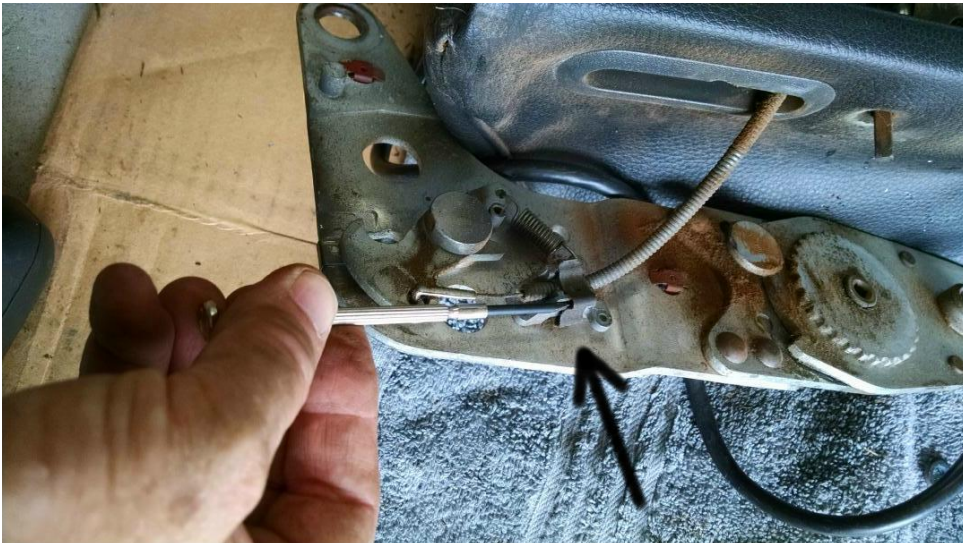


25. Now for the backrest (the bottom half was the easy part). First step is to remove the back panel. It only has one screw at the bottom center, but the edges may be very tight where they tuck into the seat. Getting it back on will be even more fun than removing it. (HINT: Rub a bar of soap around the edges of the back panel to make it slide back into place more easily)





26. These #4 Phillips screws will need an impact driver to remove: they're M8 screws secured with Blue LocTite. Try any lesser tool and you can destroy the tool, the screw, or both. And you just haven't lived until you've hit your left hand with a 3 pound sledge hammer while pounding on an impact driver. These brackets have to come off of both sides of the backrest before the cover will come off.



27. Pry off this Tinnerman clip to detach the release cable from the pivot plate. Also note the square shaft sticking out through the vinyl: this is the cross shaft from the back angle adjuster knob. On reassembly you'll need to make sure this is inserted into the hole in the pivot plate on both sides.



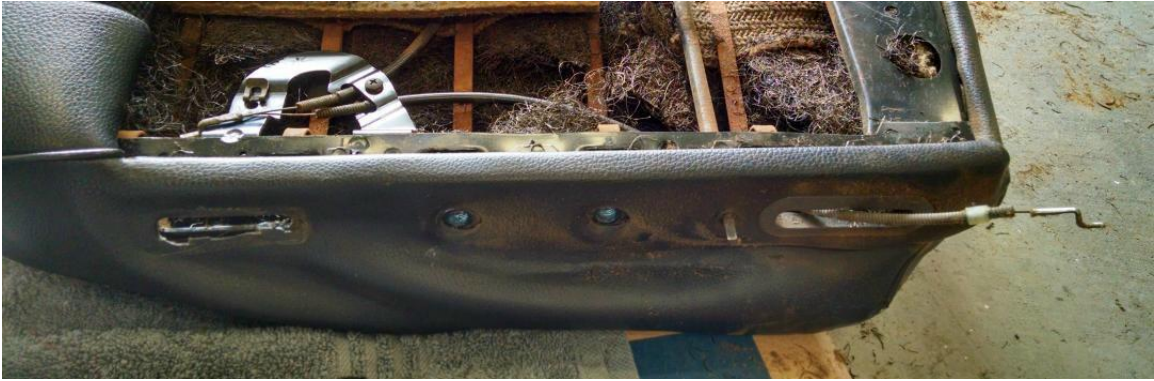


28. After the lower ends of the cables are detached, you can release the latch lever by removing its Tinnerman clip and pulling the cable end out of its hole. The lever and chrome bezel will then come out as a unit.



29. The chrome bezel is made of plastic; pry gently to avoid breaking it and it will pull out of the hole in the seat frame.





30. Here's what the backrest looks like with all of the hardware removed. You'll have to cut all of these holes in the new cover for reassembly. It's possible to save and reuse the oval grommet where the cable comes out, but it's not necessary and the part is fragile. I didn't reuse them.



31. The backrest is now ready to have its cover removed.



32. Start by using a small tool to pry the edge of the cover out of the groove at the lower sides.



33. Peel the edge out up both sides. (note that this is the same groove that the back panel will insert into, it shares the space with the edge of the cover. So with a new, fresh and perhaps thicker new cover, getting the back panel back in may be a harder push than getting the old one out.)





34. After the sides are done, peel out the bottom edge in the same way. The cover is still attached, though, by 3 clips at the top where the thick padded panel wraps around the frame.



35. To get the top edge out, I had to make this tool by heating up a very large screwdriver with a propane torch until I could bend the end into a hook. Giving this a good yank immediately adjacent to each of the 3 clips got the cover loose from the frame.



36. Here's what it looks like under the skin. Not much here worth saving, not even enough of the pad left to use as a template to cut the new pad.





37. Clean the old pad off and throw it away, and what you're left with is the spring and frame. Use this as a template to cut the new pad. Leave a little foam beyond the spring at the sides, and some extra at the top that you'll wrap over and tuck in behind the top of the frame as you stuff it into the new skin.



38. Here's the new pad, with notches cut out at the top where the headrest posts will have to pass through.





39. Attach the pad to the spring with hog rings around the edges to hold everything in position.



40. This is how the extra foam will wrap over the top. You can form it into this position as you stuff it into the new cover, or you can tie strings over the top to hold it in position and then cut them out after it's in the cover.





41. Wrap the sides and bottom edge around and tuck them into the grooves, the same way that the original cover was attached. Then stuff the edge of the upper padded part up into the 3 clips across the back. It takes some force but it's easier than it was to get the old cover out.



42. As with the lower half, you have to cut holes for the hardware and attachment bolts. For the lower cables, you can just cut a slit like this. Where the backrest release handle comes out the side, cut the cover to match the shape of the hole in the frame so you can press the bezel back into the hole. Don't forget the cross shaft for the angle adjust knob!





43. The holes for the headrest are a little tricky. The grommets in the old cover are not designed to be reusable. Insert a rod from below to find the correct position in the cover by feel and mark it (it will be centered on the pleat, and symmetrical from side to side on the cover). I heated up a 1/2" hole punch to create a clean edge and cut out the cover with manicure scissors.



44. Once the holes were cut out in the cover, I used a heated soldering iron to bore through the foam padding to make a matching hole. There's a cotton cover below that, that you'll have to cut out (I used an X-acto knife to do that).





45. Finished seat ready to slide the adjuster rails back on.