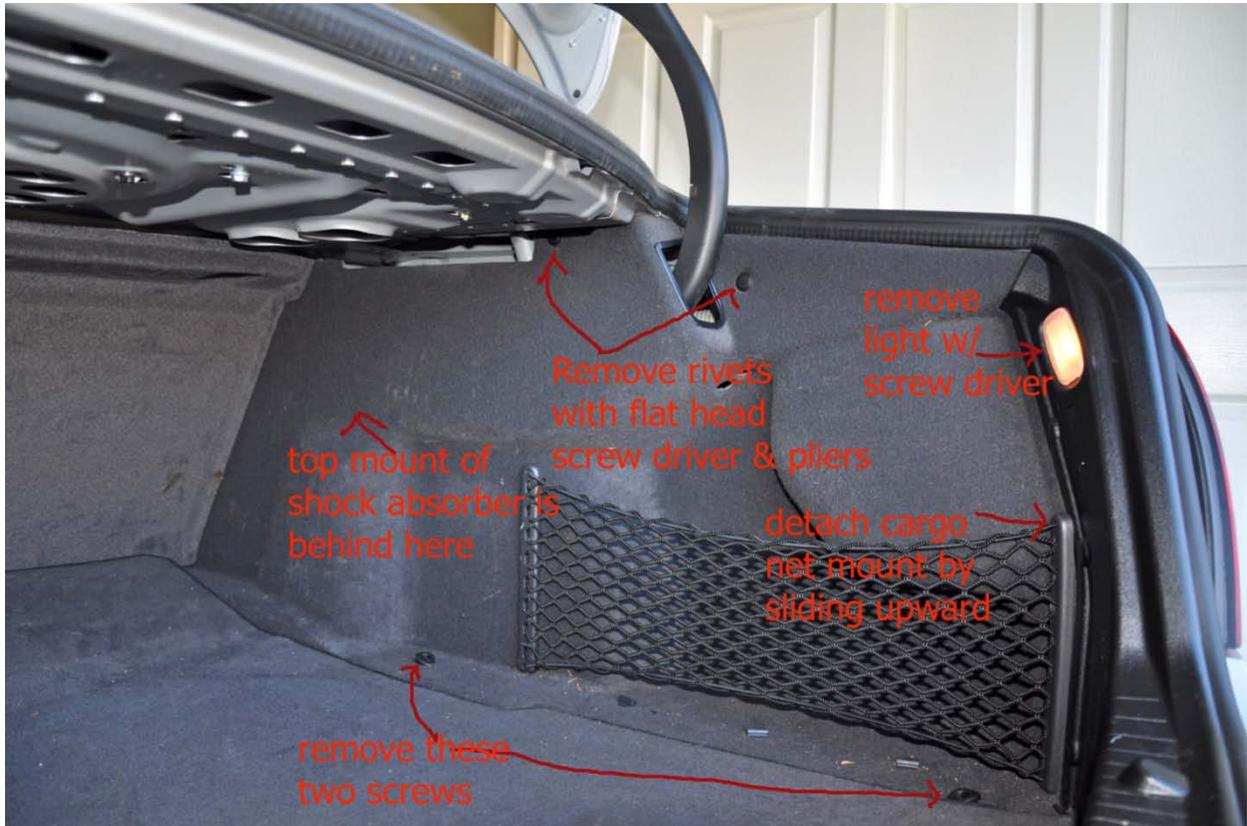


The vehicle is a 2004 E500 with airmatic suspension. At about 66k mi, the rear self leveling shock absorber (on the passenger side) started to leak, and at 70k mi, the lower shock is covered in oil. It's time to have it replaced. A worn out shock could also cause damage to the air spring.

Removal and installation procedure: approx 2 hrs of labor

1. Remove the plastic rivets and screws in the trunk as shown in the picture below. Remove the cover to expose the top of the shock absorber. The cover is made of hard plastic/cloth material, you'll need to muscle it out. It took me about 10 mins to remove the cover.



2. Pulling out the cover



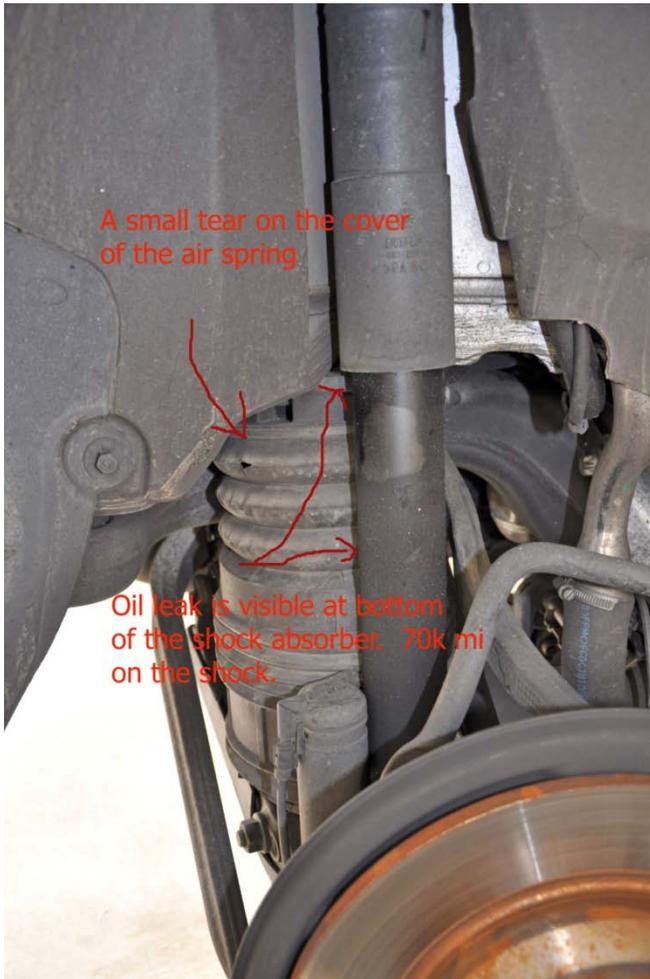
3. Cover is removed, top of the shock absorber is accessible



4. Remove the top mounting nut. Put a vise grip on the stub of the shock absorber to prevent it from spinning



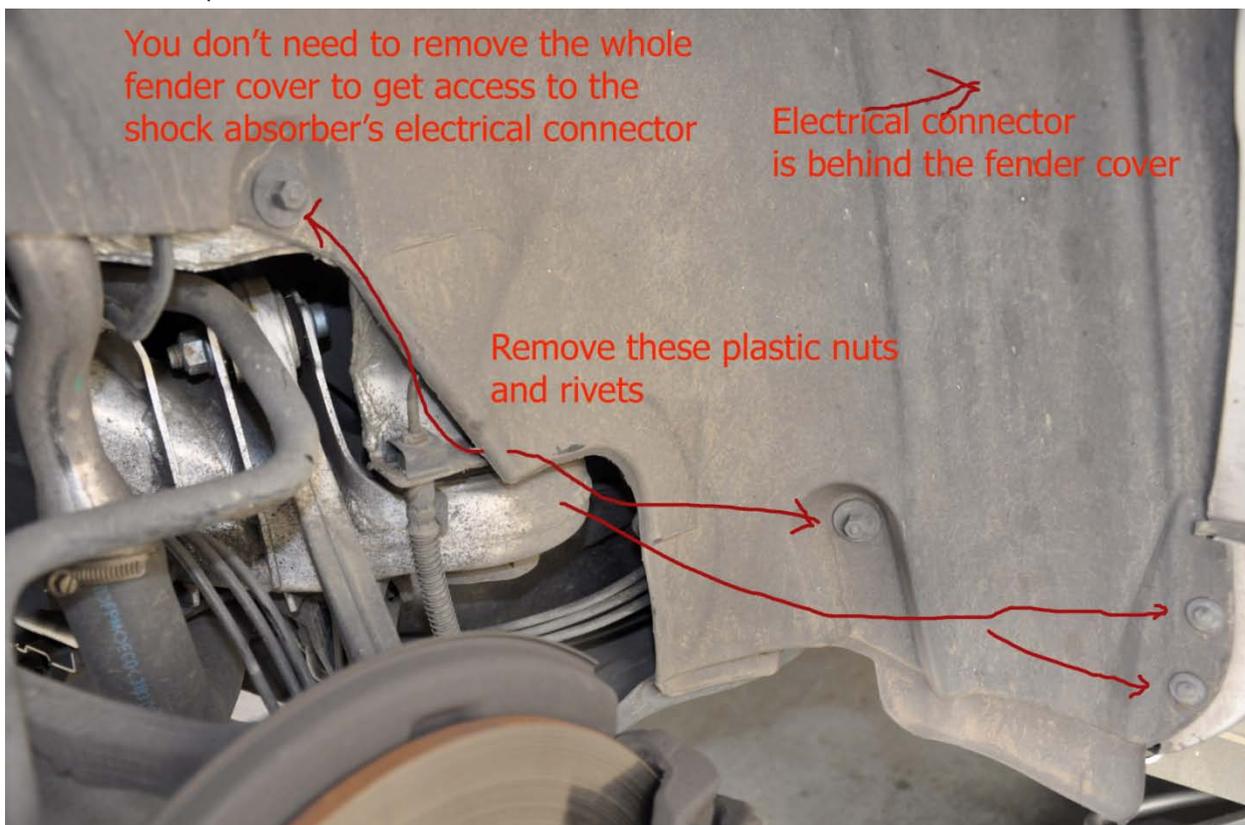
5. Oil leak is clearly visible at the bottom of the shock.



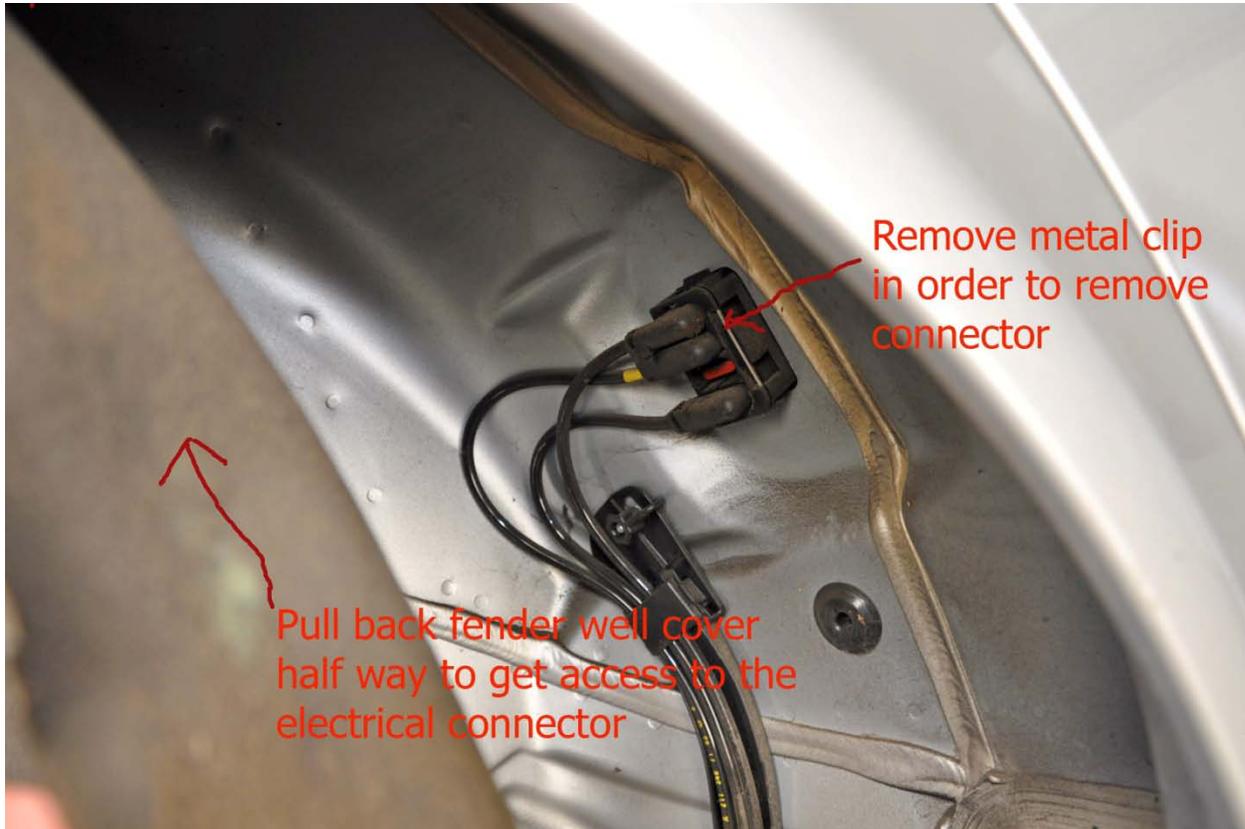
6. Use a large screw driver or pry bar to compress the shock absorber. Swing the shock out once it's cleared of the mounting hole



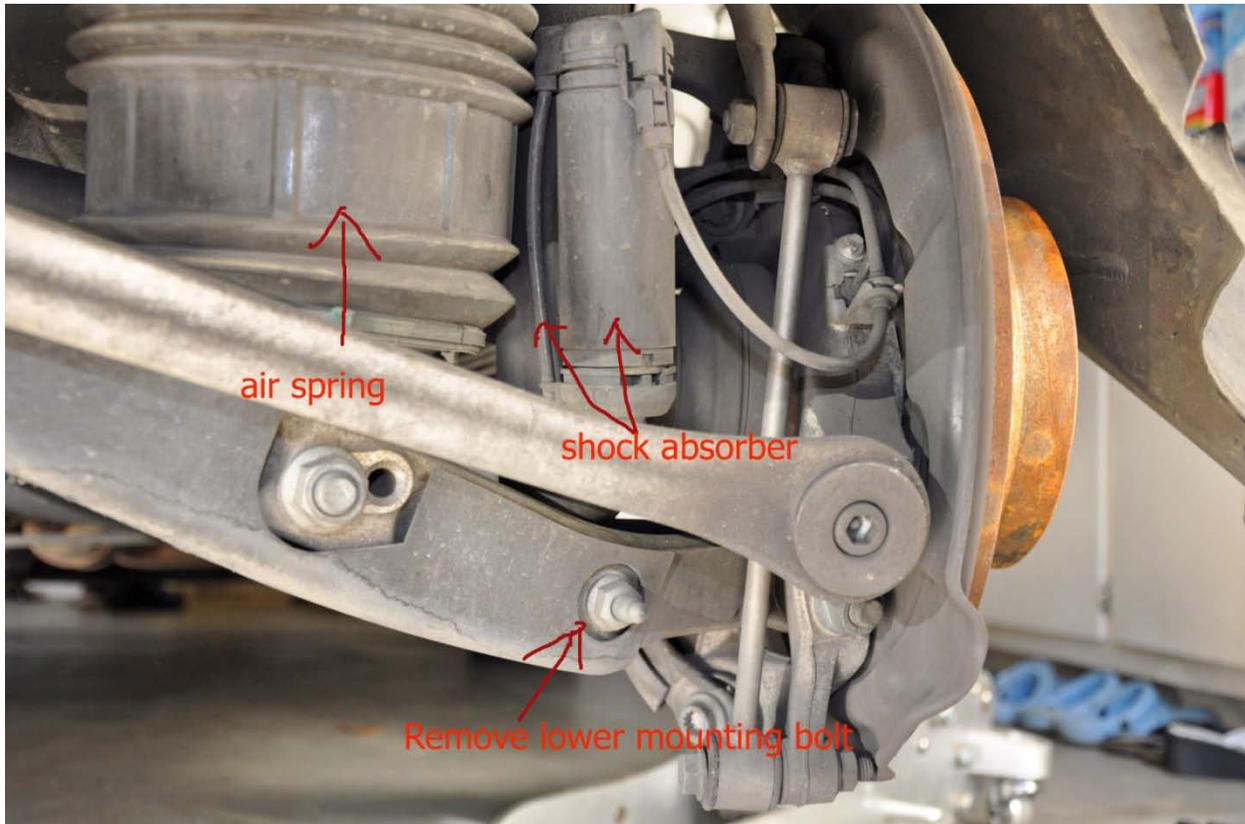
7. See picture below. Partially remove the fender well cover to get access to the shock's electrical connector. Remove metal clip in order to disconnect the connector.



8. Pull back the fender well cover to expose the electrical connector. It's not necessary to completely remove the fender well cover.



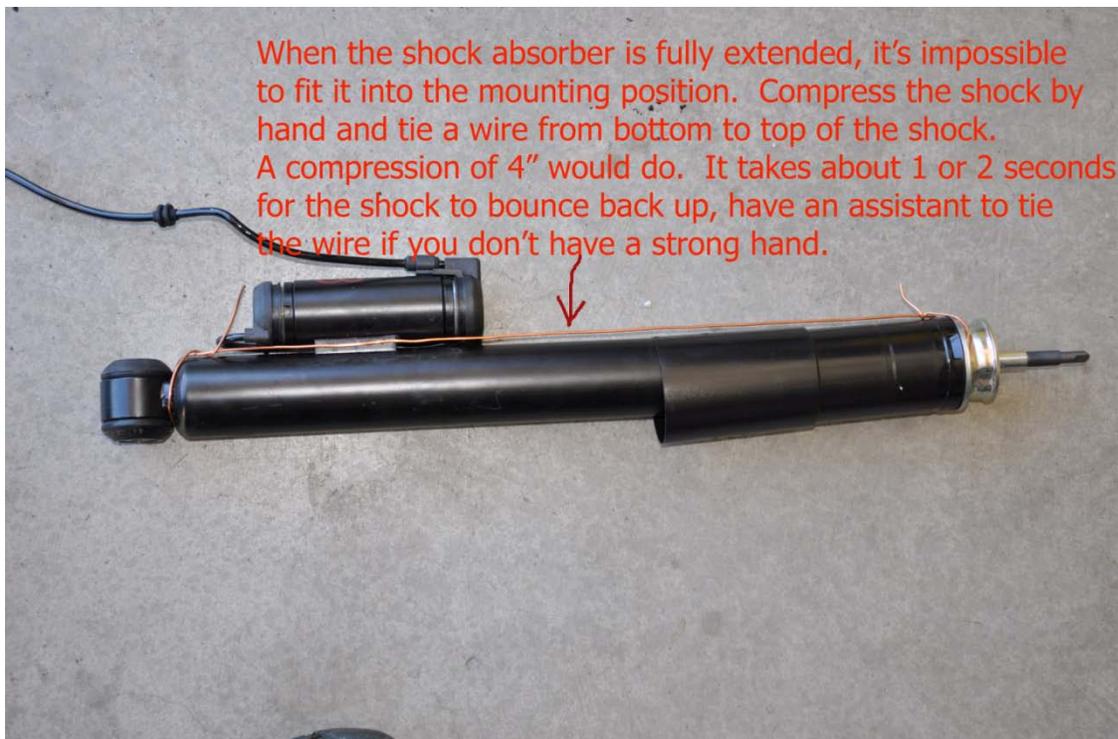
9. Remove the lower mounting bolt. Lift the shock absorber straight up and take it out.



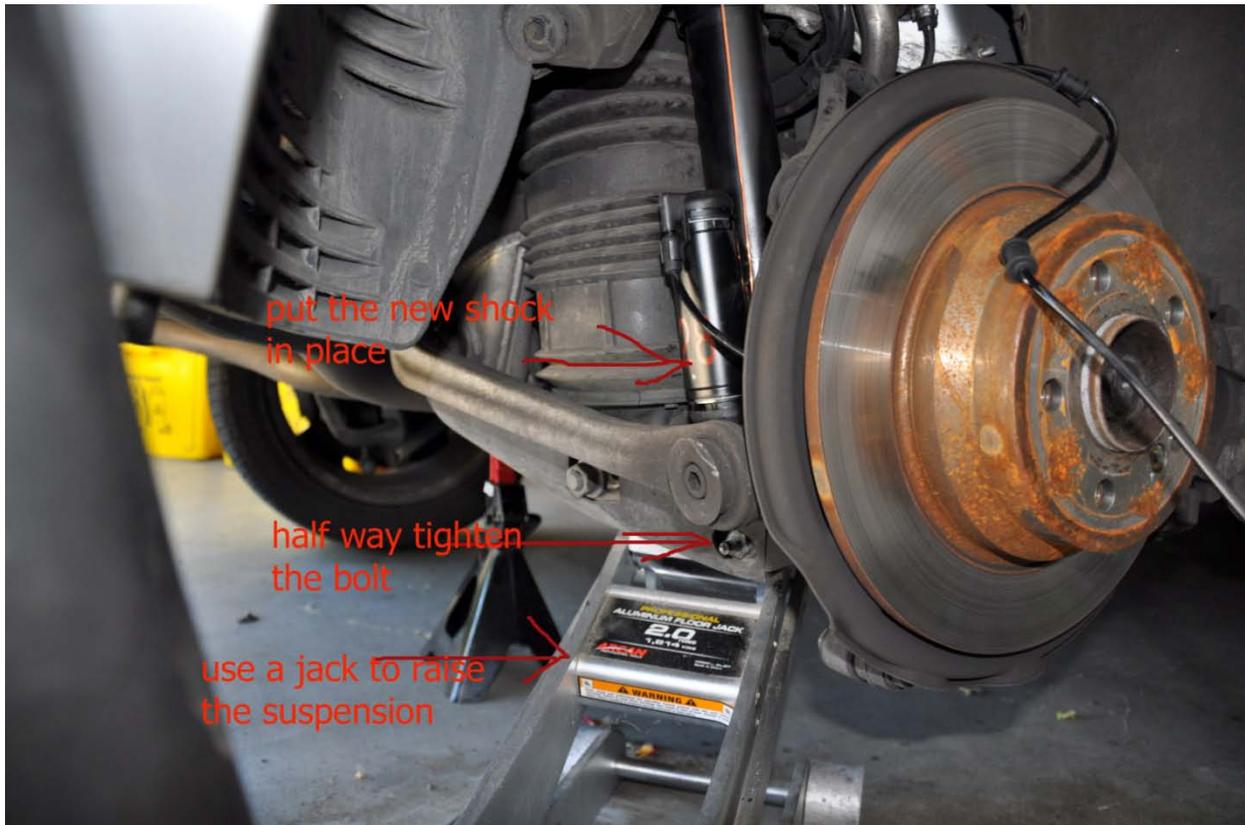
10. Old and new shocks side by side. New shock is bought from www.autohausaz.com for ~\$380. Although there's quite a bit of oil leak on the old shock, it's not completely worn out; it's still got pretty good tension and resistance. I could compress the old shock 2" by hand and it took about 1.5s for it to bounce back up, while the new shock took about 1s. The shock started to leak at about 66k mi, and at 70k mi, the bottom of the shock is covered in oil. My guess is that in another 3k mi, the old shock would be completely worn out.



11. When the shock is fully extended, it's impossible to fit the shock into the mounting position. One trick I used is to compress the shock by about 3" or 4" with one hand and tie a wire between the bottom and the top of the shock with the other hand. See illustration below. Now the shock is ready to be put into the mounting position.



12. Put the new shock in place. Tighten the lower bolt half way. Use a floor jack to support the suspension.



13. Use a floor jack to raise the suspension and align the stub of the shock absorber to the mounting hole and cut the wire. Once the wire is cut, the shock will expand. Tighten the nut on top of the shock. Remove the cut wires.



14. Connect the shock's electrical connector. Put everything else back into place, and you're done.