

# Mercedes W208 (CLK '99 – '03) Case Cover Lock/Rear Bow Lock Replacement and Hydraulic Fluid Flush



*Because a convertible is only cool if the top goes down....*



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# Tools and Parts

While all the below tools and parts are recommended, three of them are optional. These include:

- 1 **Electric Drill** – for faster removal of 10mm hex bolts
- 2 **Siphon** – for recommended complete fluid flush
- 3 **Plastic Panel Removal Tools** – for easier removal of carpet plastic fasteners (a flat head screw-driver also works)



Febi Hydraulic Fluid 02615

NOTE: This is the **Only** Mercedes Approved Substitute

**DO NOT USE ANY OTHER TYPE OF FLUID**



# Hydraulic Fluid - Level Inspection

Although it is not obvious, there is a simple way to observe your convertible top hydraulic fluid level, directly from the trunk. There is actually a “portal” that you can look through with a flashlight – there is even the beginnings of the cut in the carpet, similar to the opening for the hydraulic pump relief screw (that you use to raise the top manually) – but for some reason Mercedes Autoworkers only cut 2 of the 3 sides needed. Cut the bottom with a small razor blade, and you are in business.



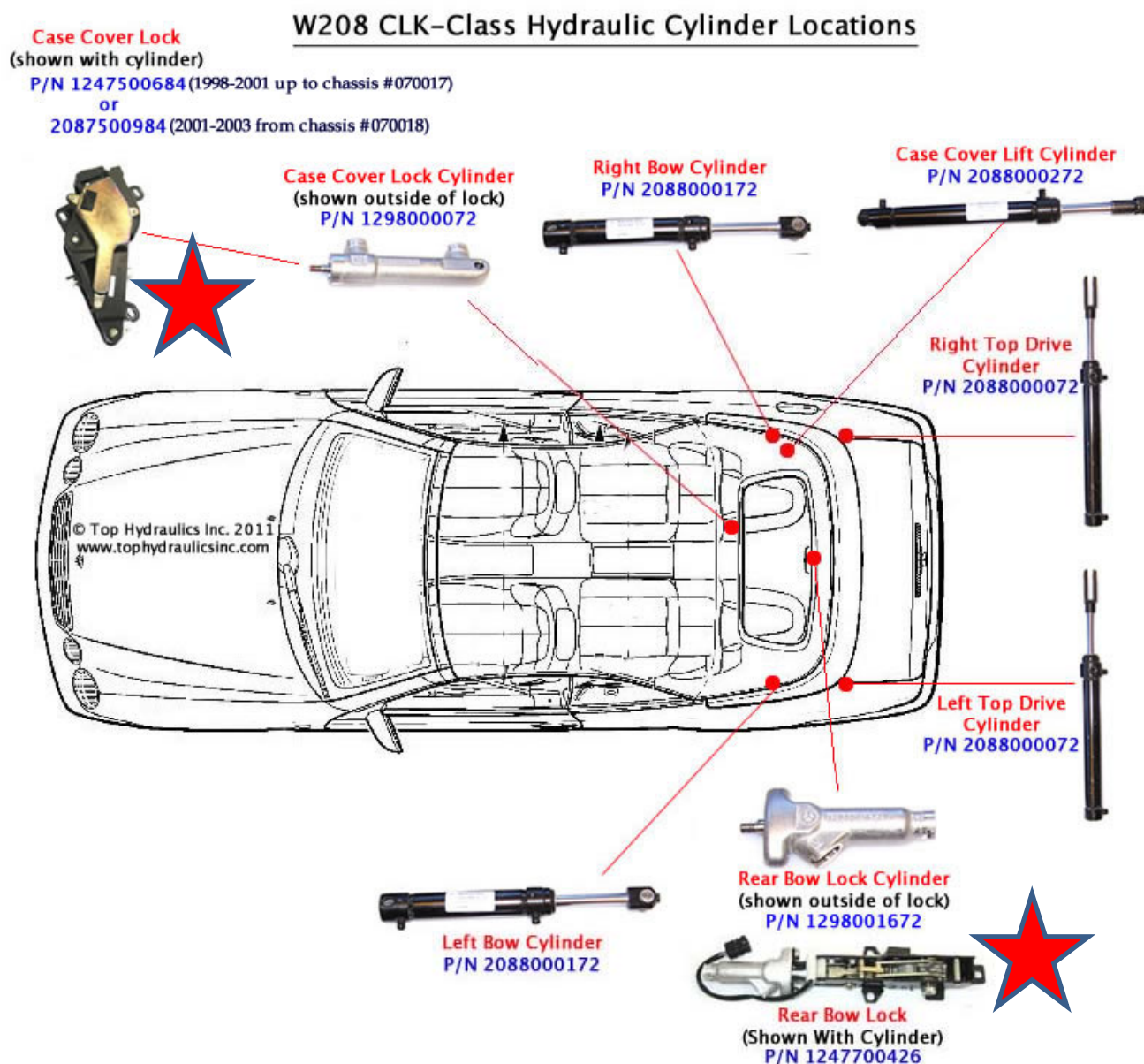
You can now see the level with a flashlight (lying down on your stomach) . **Note:** This picture shows the correct level, not the level you’ll probably find if you are having slow/no moving top issues. If your level looks fine, your issue is probably NOT with the hydraulic fluid system, but probably a relay or a switch.



# Leaks and Cylinders

If your hydraulic fluid is “low”, there is most definitely a leak in your system – *somewhere*. Hydraulic fluid does evaporate, but at a very miniscule rate. The most common elements that leak are the rear bow lock and/or the case cover lock, and the specific instructions to replace both of these parts follow.

While the parts are available directly through Mercedes, the most economical way to procure them is through a core exchange via Top Hydraulics. To simplify the operation even further, Top Hydraulics will ship you rebuilt cylinders, already mounted in the proper lock assemblies ( ★ below ) , and charge you a \$150 refundable core deposit for each. Simply ship your old ones back when you are done, and you’ll get your refund (provided you don’t damage them when removing!). This is the way to go as it will save you hours of installation time.



## Top and Cover Positioning

The first step necessary is preparing your top and top cover so its in the correct position so you can work on it, however, you FIRST must do the following from within your trunk, as once you are underway, access to your trunk through the boot will not be possible. **Note:** The below instructions assume your top is still functioning (albeit slowly) – if your top is not functioning at all, you must follow the instructions in the Mercedes handbook for manual operation via the special wrench process.

1. Remove your trunk floor liner – put it in a safe place.
2. Leave the trunk luggage screen fully deployed/in place/operational as if you were going to put the top down (it is easier to relocate from inside the top cover panel).
3. Close the trunk.
4. Manipulate so that the convertible top and rear top cover are in the same positions as the below picture demonstrates – do this via the dash open/close control (or via the manual process outlined in the handbook).





# Front Carpeting (Top) - Removal

The front decorative carpeting is fastened using a multitude of plastic fasteners – the smaller ones pop up (use a plastic panel removal tool), the larger ones unscrew (there is a threaded rod connected to the frame underneath).



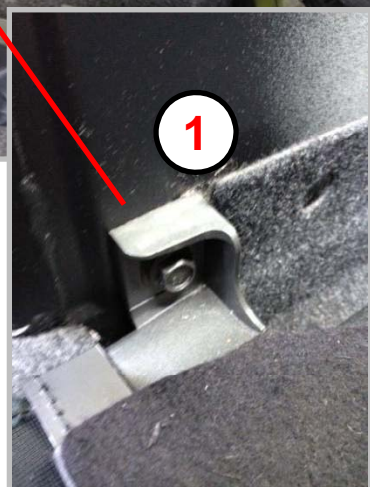
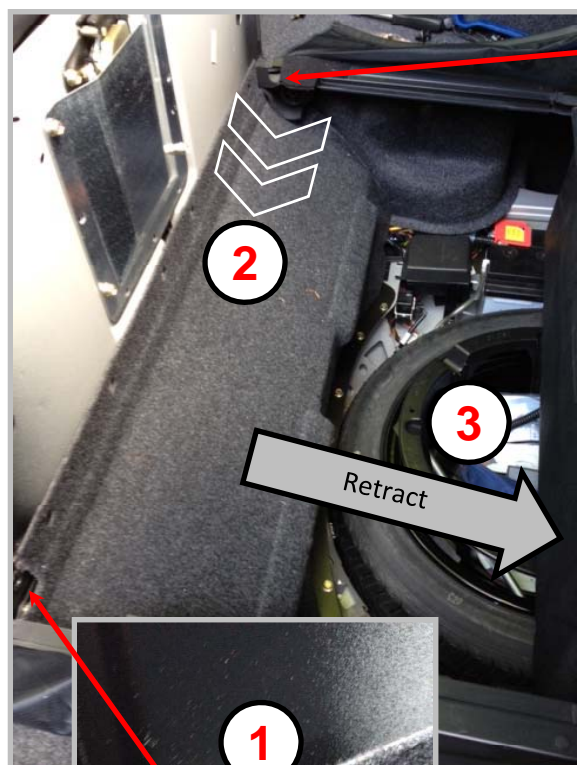
When all fasteners have been removed, simply pry-up carpet, and remove to a secure place (like the hood of the car....)



# Trunk Luggage Screen - Relocation

Removing/relocating the trunk luggage screen is a very simple matter, and when done this way will continue to make contact with the switch in the rail so that you can easily perform testing of the top when done. Follow the steps in this order:

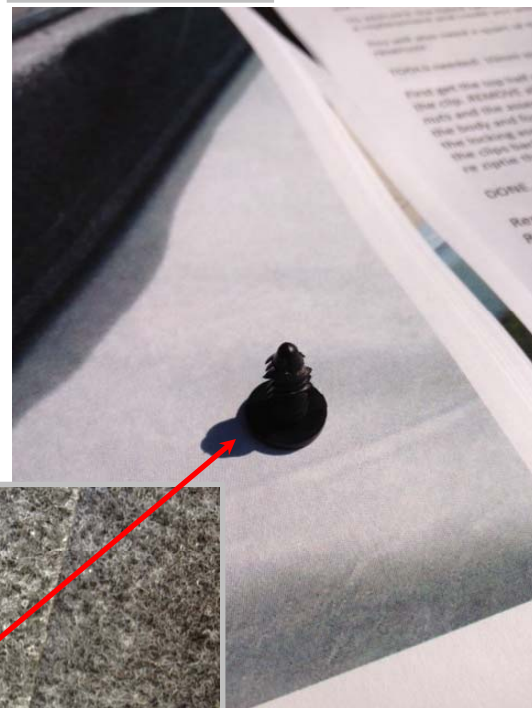
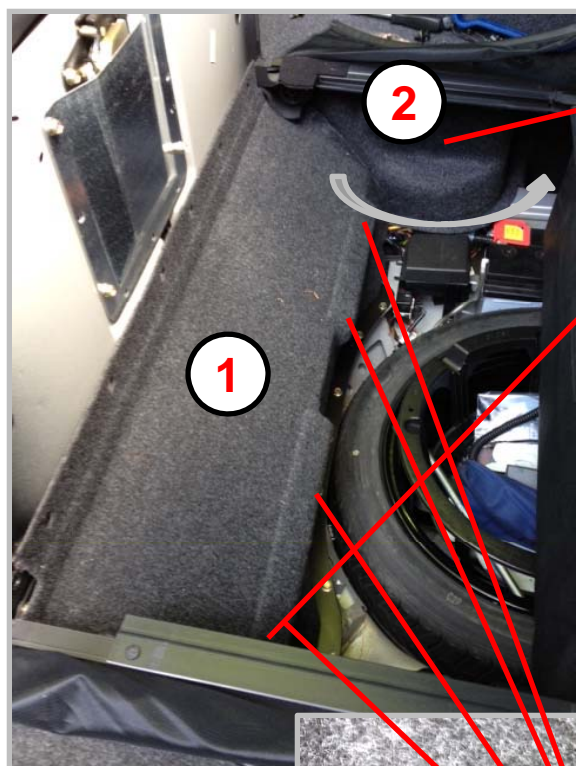
- ① While holding the screen bracket, remove the single screw – peel up the bracket that will be also fastened to the car via a small fabric piece that is glued on.
- ② While holding the middle of the shade so that it doesn't spin, pull the entire shade assembly towards you, which will free the far side from its corresponding bracket.
- ③ Let the shade retract (slowly) towards the rear of the car, holding the middle cylinder with one hand and the bracket with the other – leave as shown – should just hang there under its own tension.
- ④ Remove the far side bracket screw and simply "flip up" out of the way slightly – no need to release the glued fabric on this side.





## Front Carpeting (Bottom) - Removal

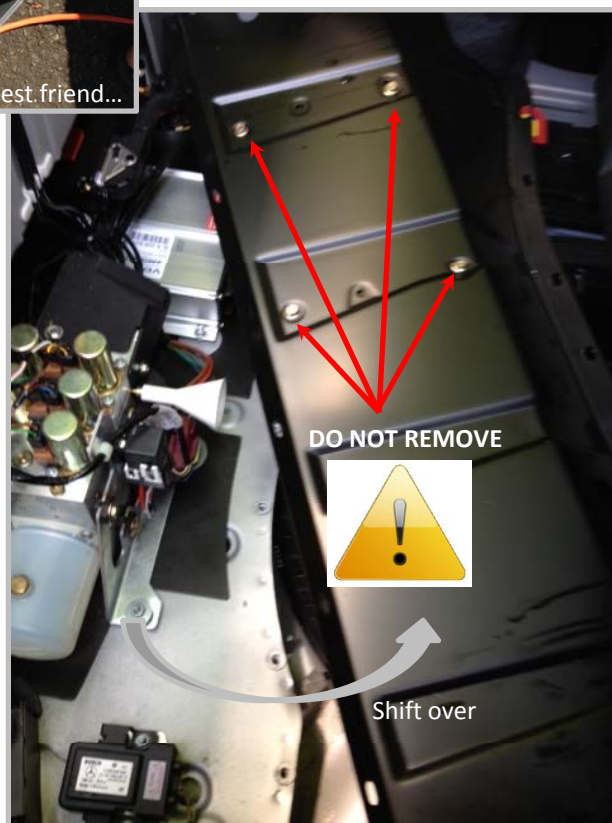
The remaining bottom carpet piece (1) is held only in place by 4 single piece plastic push pins. The two side pieces (2) connect in multiple places, but can be moved out of the way by removing the large button on either side (unscrew) and then by folding the carpet back towards the rear of the car.



## Bottom Angled Panel - Removal

To remove the bottom angled panel, you must remove ALL of the gold 10mm bolts from the perimeter of the panel. An electric drill with a bit adapter is useful for most of them, but some bolts around the perimeter will require a box wrench to get access.

**Do not remove** the 4 interior bolts from the mid/right side of the panel as they hold the Bose amplifier underneath. Once all the bolts are removed, you can carefully shift the panel as shown below, exposing the pump assembly.

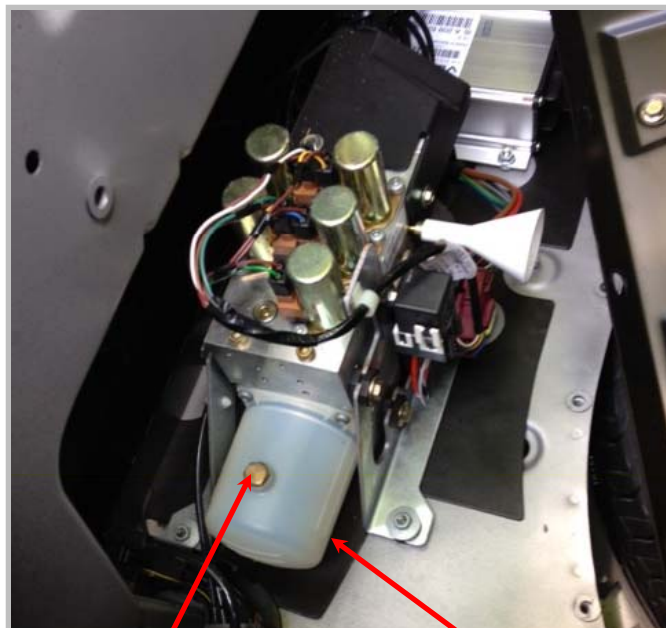




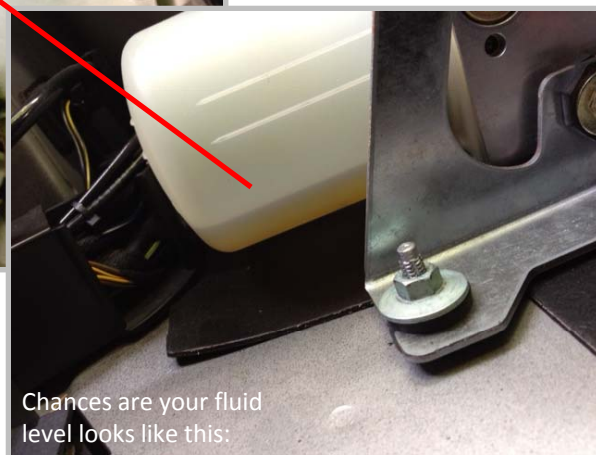
# Hydraulic Pump

Now that you have access to the hydraulic pump, you can refill the fluid level (to get your top working in the interim/help identify your leak), although this is not required if you already know where your leak is, or you are just proactively replacing your lock(s).

Before you begin the next steps of replacing your case cover lock or rear bow lock, its important to release pressure in the system by turning a standard screwdriver two turns to the left (if you haven't already done this as part of a manual process.)



Remove bolt and refill using small funnel (if required to help identify leak location)



Chances are your fluid level looks like this:

## Case Cover Lock - Panel Removal

First, remove the 4 bolts holding the protective panel over the case cover lock – place panel in a safe place. If you have a case cover lock leak, you will notice it somewhere in this area.





## Case Cover Lock - Removal

Using the needle nose pliers, remove the hydraulic line clips from both lines and pull the lines free of the case cover lock – make sure you label which line goes where, although they are easy to tell just by their length. Separate the electrical connector as well.

PUT THE CLIPS SOMEWHERE SAFE AS YOU WILL REUSE THEM LATER.



## Case Cover Lock - Removal

Unscrew bolts and completely remove case cover lock – put in a safe place.





## Case Cover Lock - Preparation & Installation

Partially slide the hydraulic line locking clips onto the body of the new lock as shown – its much easier to do this before you mount it on the car. Remount the lock as shown below and then reattach the hydraulic lines (just push in tight) and then use needle nose pliers to firmly slide the clips, securing the hydraulic lines to the new lock. Reconnect electrical connector.



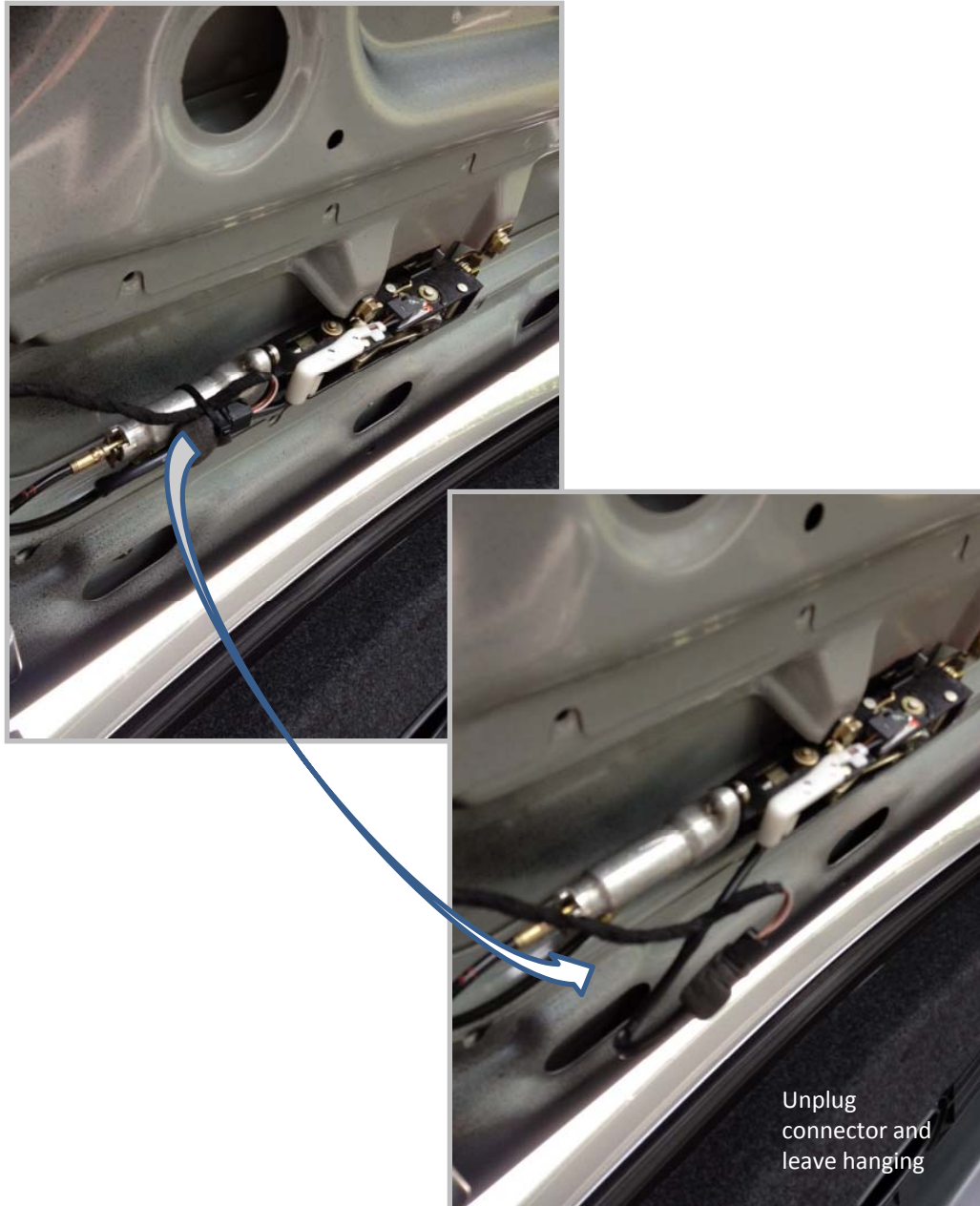
## Rear Bow Lock - Carpet Removal

Using the plastic panel removal tool, remove all of the plastic fasteners. Completely remove the carpet and place somewhere safe. The rear bow lock assembly is now easily accessible. Any leaks will be clearly visible.



## Rear Bow Lock - Tie Wrap Cut

Using your razor knife or wire clips, carefully cut the tie wrap holding the electrical connector to the body of the valve. Unplug the connector and carefully remove the foam rubber around the connector as you will re-use this on the new assembly.





## Rear Bow Lock - Removal

The hydraulic line clips remove in the same fashion as the Top Cover Lock – remove these.  
PUT THE CLIPS SOMEWHERE SAFE AS YOU WILL REUSE THEM LATER.

Completely remove the rear bow lock by removing the 4 outer bolts. Do not loosen the 5<sup>th</sup> bolt that holds the assembly onto the T-mount.



## Rear Bow Lock - Preparation and Mounting

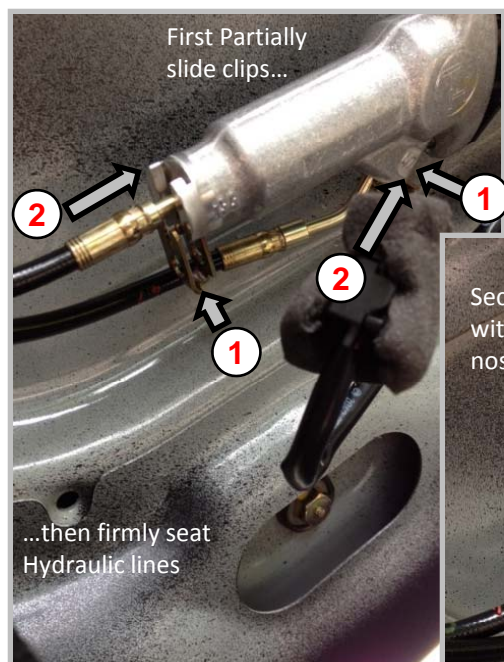
You must now remove the copper T-mount from the old assembly by loosening the single bolt and re-attach it to the new assembly – keep fairly loose for now.

Attach the new Rear Bow Lock on the Top Cover by first tightening the 4 outer screws, then tighten the 5<sup>th</sup> screw as shown below.



## Rear Bow Lock - Final Installation

Slide the hydraulic clips partially onto the valve body using needle nose pliers, and then push in the lines firmly. Secure the clips. Slide the foam on as it was before (I damaged mine slightly taking it off) and then re-attach the electrical connector. Complete the installation with a single tie wrap (I only had white, but use black if you are a stickler for detail....)





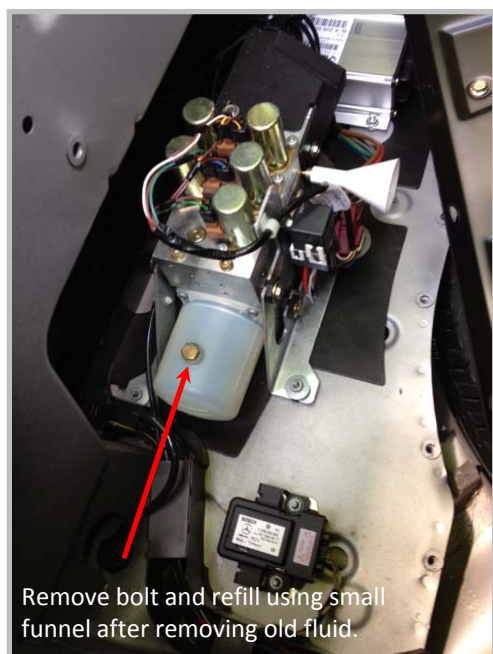
## Hydraulic Fluid - Flush and Refill

Unscrew the brass reservoir screw using an adjustable wrench (put screw somewhere safe where you won't lose it and where it can't fall into the trunk under the spare tire!) Using the siphon (and any convenient small soda bottle), completely remove any remaining hydraulic fluid from the reservoir (and please dispose of properly.)

**Note:** The fluid removal step is not required, but it is highly recommended as the fluid in the system will be as old as your car! Additionally, you should also check the bottom of the reservoir for water or small particles, as they should also both be removed – Water will ruin the OEM seals, and small particles will wear out the system.

Replace with new Mercedes or Febi fluid as shown to the very top of the top line. Replace the brass reservoir bolt and tighten (but not too tight as the reservoir is plastic.)

**NOTE:** if you have ever used Stop-Leak type products in your system in the past, you should repeat the fill/remove/fill procedure several times, cycling the top at least 10 times (See next page – System Test). All Stop-Leak type products are bad for the hydraulic top system, and they will eventually make all the OEM cylinder seals fail.

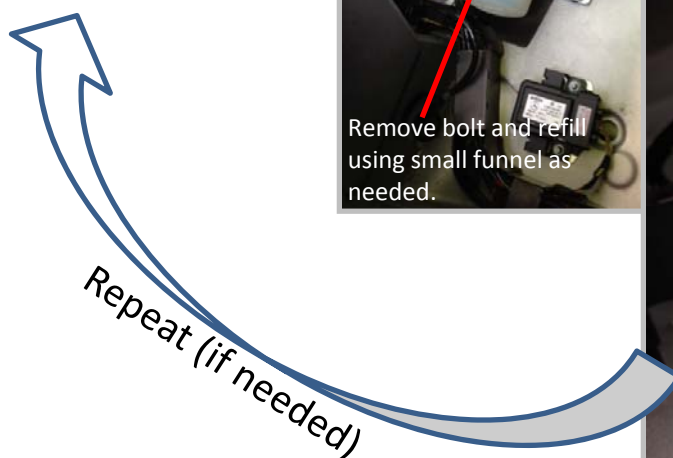
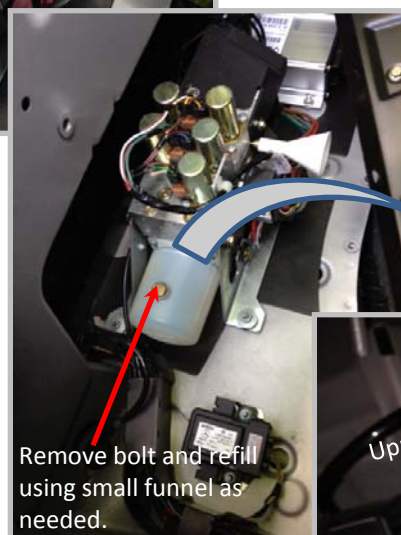


# System Test

First, tighten the screw on the hydraulic pump 2 turns to the right to “close” the system. Next, make sure the convertible top area is completely clear of tools, fasteners, etc. Start the car and cycle through 5-10 full open/close top cycles.

**NOTE:** Due to some air remaining in the system initially, the front edge of the convertible top may BANG down on the top of the windshield header when closing, so you may want to “catch” the top with your left hand as it comes down. This will clear after approximately 10 cycles as air is automatically bled out (system is self-bleeding.)

You may need to continue to add hydraulic fluid during the process (remember to turn screw to the left to release pressure before you open the reservoir) to ensure the level stays at the very top line, as fluid continues to be pulled back into the system and air is returned to the reservoir.



## Rear Bow Lock - Carpet Reassembly

Reinstall the rear bow lock cover, being careful to re-fit the two outside edges of the carpet piece underneath the rubber edge of the lid. Secure with all of the plastic push pins you removed before.





## Case Cover Lock - Panel Reinstall

Reinstall the protective panel over the case cover lock and tighten the 4 bolts.



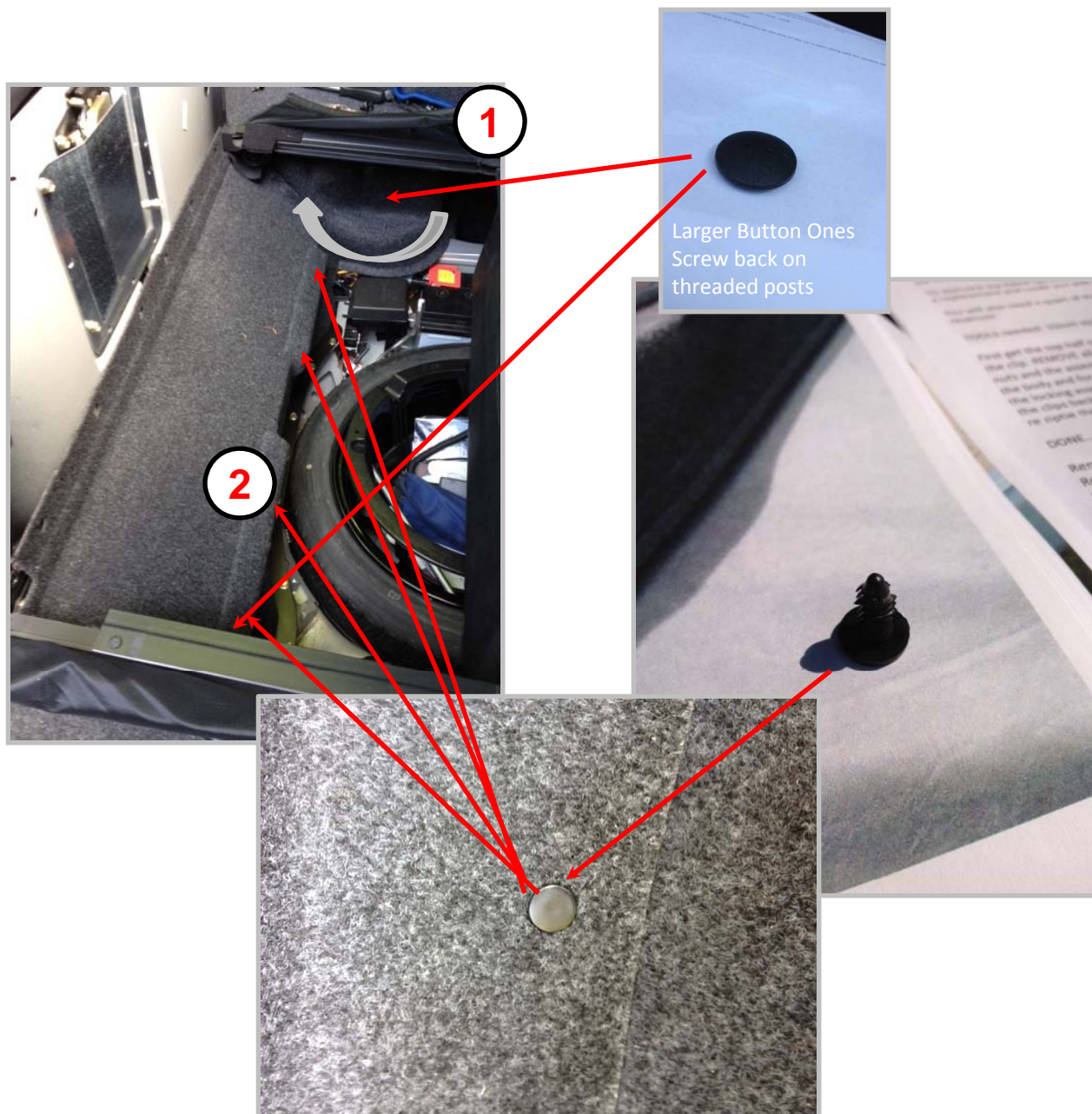
## Bottom Angled Panel - Reassembly

Carefully re-position the bottom angled panel back in place and then reinstall ALL of the gold 10mm bolts around the perimeter of the panel.



## Front Carpeting (Bottom) - Reassembly

Fold the two side carpet pieces back in place over the threaded posts and re-install the 2 larger buttons by screwing onto both sides of car, **1** and then reinstall the bottom carpet piece **2** using the 4 single piece plastic push pins.

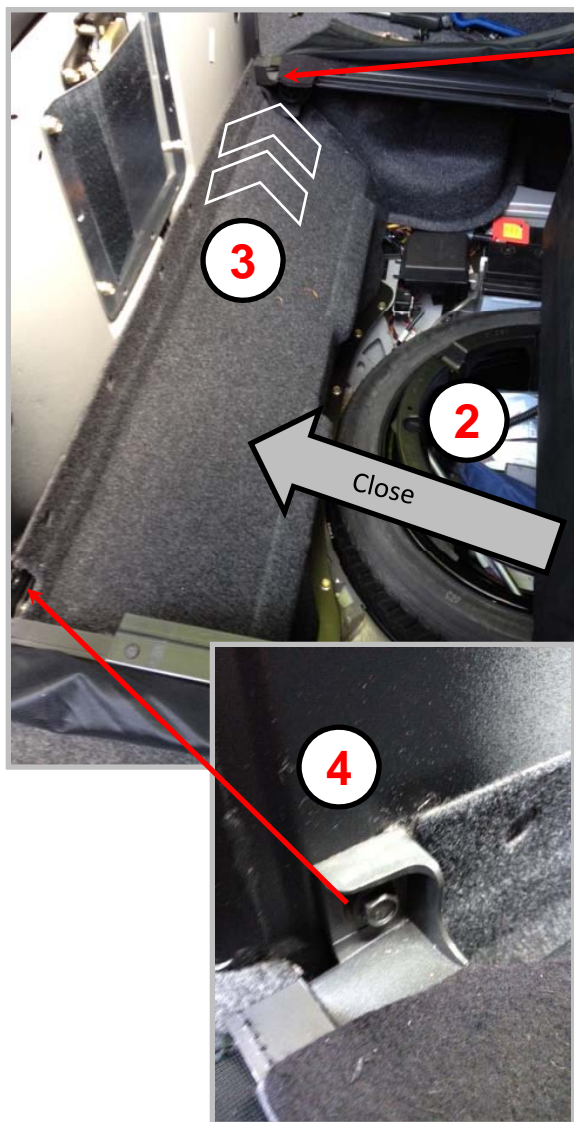




# Trunk Luggage Screen - Reassembly

Re-install the trunk luggage screen by following these steps (Note: This is easier to do with two people on either side to ensure the screen doesn't unroll, losing spring tension) – If the screen “unravels” a bit and you lose spring tension, do not panic, just follow the steps on the next page.

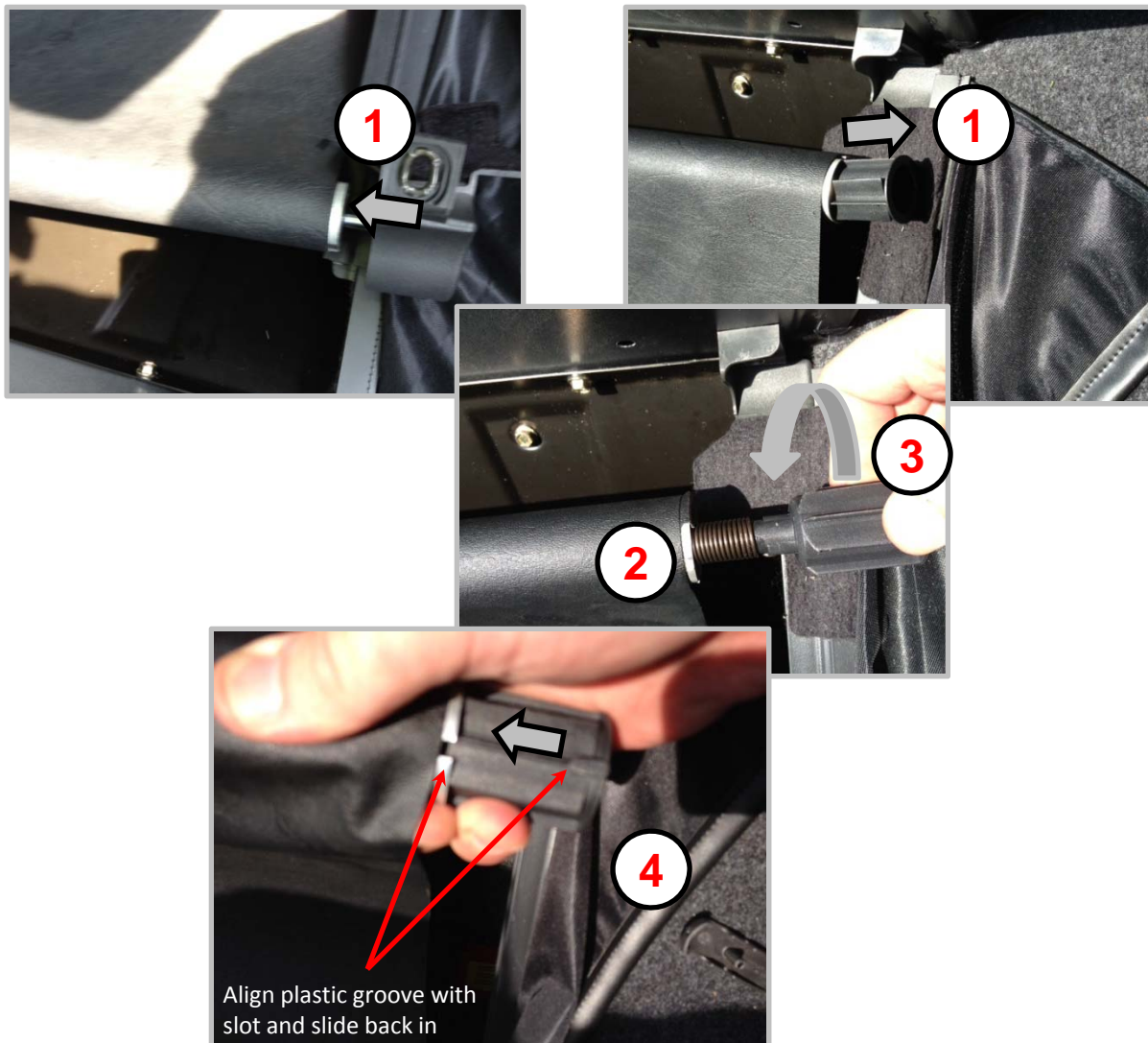
- ① Flip the far side bracket back down and reinstall the bolt. Be sure to have the other side bracket/bolt near you so you can easily reach it later.
- ② Slowly close the screen towards the front of the car, holding the bracket and the middle of the screen.
- ③ Reinsert the far end of the screen into the far bracket, making sure the spindle is well-seated.
- ④ Fit the close end bracket back over the spindle, and reattach the bolt, pressing down on the fabric to help re-glue it to the frame rail.



# Trunk Luggage Screen - Spring Re-Tension

If you have lost spring tension in your luggage screen during the relocation/re-installation process, follow these steps to get it back – **Note: This is a two person activity!**

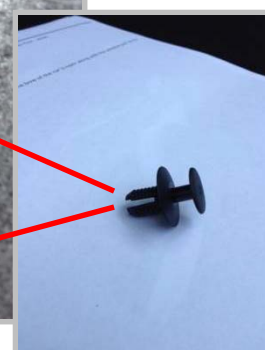
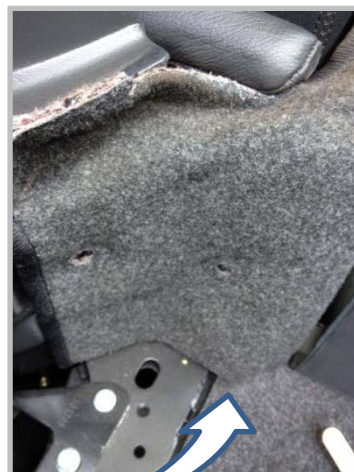
- 1 With someone holding the far side, from the drivers side, push in on the spindle hub, this will push out the opposite side.
- 2 If you pull it out farther you will see a spiral spring, but this is not required, and it makes sliding it back in difficult (have to jiggle it), so just leave it out just far enough so you can turn it freely (as shown in step 1.)
- 3 Turn the plastic end counter-clockwise – if your spring is fully released, you will need to turn it about 15 full turns. Be careful not to over tighten as you risk snapping the spring.
- 4 When you are done tightening, align the matching groove into the slot on the metal tube to lock the screen back in place. Complete process as shown on previous page.





## Front Carpeting (Top) - Reassembly

Refit the top carpet in place, aligning it along the top edge and over each of the threaded rods. Reinstall the plastic push pins and larger button caps. Don't forget to refit the elastic loops on the side mesh before you insert the last 2 push pins.



**NOTE: Remember to re-fit the elastic loops**



# The Turtle

Although it has absolutely nothing to do with the repair, I wanted to mention *the turtle*.

On one of my multiple trips to the local hardware store (this time to buy a funnel that fit the hydraulic reservoir – *I actually took the “Tools and Parts” photograph on page 3 AFTER I was done*), a turtle actually crossed the road in front of me. Took about 5 minutes for him (her?) to get across.

***I assume it was good luck!***

