

Prevent Rear Door Failure (by DerekBGilray)

I've known for a long time that one inevitable failure in the LR3 is the rear door hatch. Because the handle for the tailgate is in the upper door and the actual lock assembly is in the lower gate, they are separated by electronics. This means that any failure to your electrical system, the rear lock actuator, or the connection between the actuator and the lock assembly (most common) will result in a rear door that won't open. The only way to fix this once it happens is to crawl into the back of your truck and cut a hole in the tailgate trim and pull the cable manually. Not pretty.



It's been on my to-do list for a while to find a preventative solution to this issue. It was never really pressing until last week when my dad called and said his LR3 wouldn't open and he needed to haul a bunch of tents and gear with it. He was not happy to find out that the only solution involved a hole saw and a couple hours labor. I now had the kick in the pants I needed to solve my problem before it became a real problem.



Here is the process to get it installed. (If you door already will not open, you will need to follow the process in some other threads to get it open first. My steps pick up where you already have a functional door.

1. Open up the rear tailgate. Remove the top trim (4 Philips screws with covers that pry off), cable stays (13mm deep socket), and carpet trim (held in by clips).



2. Remove the rubber gasket



3. Remove the Rear actuator assembly (8mm bolts) and the plastic cover of the actuator assembly (T15 Torx). Here is the biggest culprit. The black plastic clips can break causing the cable to fall loose from the actuator.



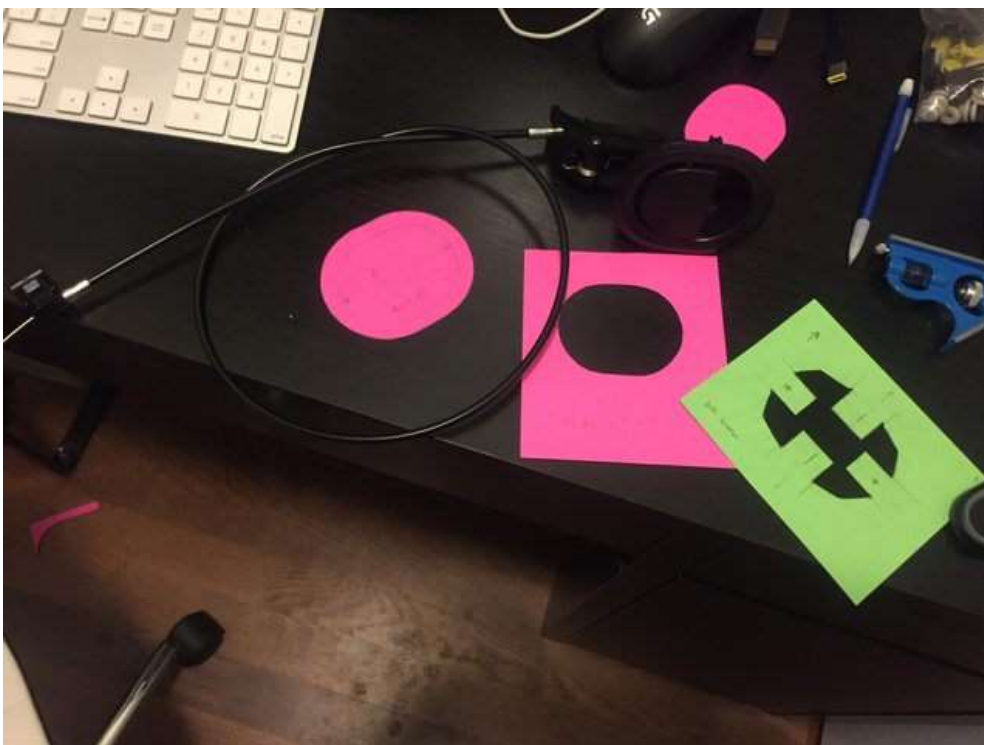
4. Fix actuator clip with zipties. This is a preliminary fix. This will solve most problems with the actuator separating from the cable, but will not prevent issues related to the actuator or a dead battery.



5. Buy Cable pull handle. I searched forever to find something just right. I looked at tailgate handles, bike brake levers, hood releases, mower throttle cables, car door handles, Discovery I rear gate handles, etc. All of them were either too expensive or wouldn't have looked right countersunk into the LR3's rear carpet. Then I stumbled across these pull cables for recliners. PERFECT!

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6. Now that we have all the parts, it's time to start mocking things up. First I traced the new recliner handle to come up with templates for the hole that would need to be cut in the carpet and the hold that would need to be cut in the Subwoofer frame.



7. NOT PICTURED, but i re-installed the carpet and masked off where i wanted the handle to be placed. Verified that the hinge cover flap did not interfere with the handle with the gate closed. I then drilled a center hole down through the carpet and into the black subwoofer frame below. I then removed the carpet and made sure that this center point would not interfere with the actual sub or any of the mounting bolts for the subwoofer.

Sounds complicated but TLDR: I lined it all up real good.

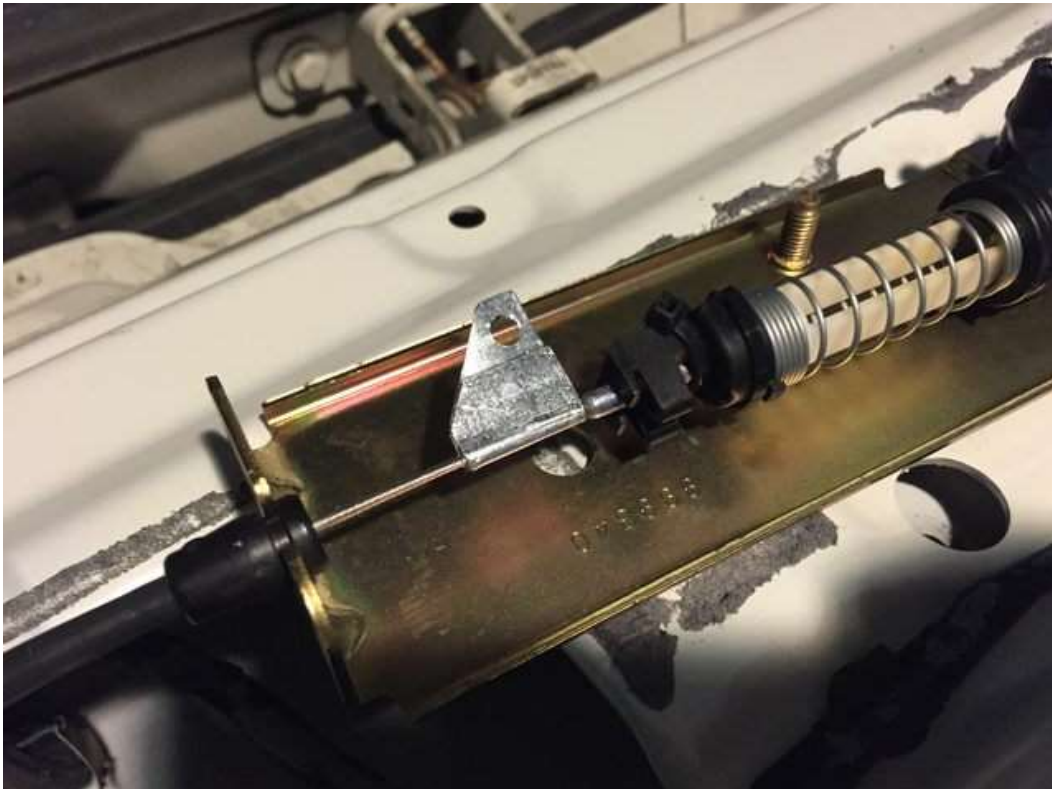
8. Cut the subwoofer frame. I removed it from the truck (T30 Torx bolts), then removed the actual subwoofer from the frame (8mm bolts). I screwed the frame to some 2x3 scrap wood to give a solid base to work on. I then marked out the template I created that would give me 4 nice stands to mount the handle against and went at it with my cutoff wheel:



9. I scored the surface of the metal to create a natural place for the 90 degree bends, then used a pliers to bend up the prongs. Once this was done, I used a grinding disk to make sure that the top edge of the prongs was aligned and flat. Using a caliper I measured the thinness required from the subwoofer mounting plate to the carpeted gate and determined the prongs needed to be about 14mm tall.



10. Moving on to the actuator assembly, I needed a point where I could attach this secondary pull. I wanted to make sure that the new handle would be functional for any possible failure, so "sistering" the new cable to the existing one was a must. I used a small scrap of sheet metal cut into a triangle, then drilled a hole in it for the new cable and crimped it tightly to the existing cable. This setup also helps to reduce any lateral stress on the actuator when you pull the auxiliary cable.



11. I decided to avoid modify the recliner pull cable too much. The only thing I did was removed the spring they had around the cable end. In order to mount it into the actuator assembly, I found that the cable clip aligned very well with one of the existing screw positions. I drilled out the clip on the cable so that it would fit tightly around the LR assembly screw post. I also added a zip tie around the end of the pull cable to make sure it was permanently secured into my makeshift sheetmetal bracket. Once the cable was installed, I screwed the actuator assembly back together and reinserted it into the door, taking care to route the new cable internally over to the subwoofer opening.

Hole drilled:



Cable installed:



12. Seal it all up. Atlantic British will sell you a replacement door gasket for \$75, or you can use some sample sound deadening like I did. I paid \$15 for a variety pack that did the job. I also added a piece of deadening inside the door just to make sure that I wouldn't get an new vibrations or noise now that another cable is running through there.



13. Paint the subwoofer bracket, reassemble and install. Make sure to pull the new cable through the opening.



14. Use a dremel to cut a hole in the carpet section of the tail gate using the center point we drilled earlier. Be sure to remove the insulation behind where you are going to cut FIRST or it will bind up. You will need to remove some extra plastic material at the N S E W positions to make clearance for the metal tabs. Do not remove more than 2mm or it may be visible after the handle is installed.



15. Test fit. This is the part where I actually determined that 14mm height was needed for the tabs. my original calculation put it at 17.5mm but at that height the handle didn't countersink into the carpet the way I needed. I also took this time to make sure that the tabs were all bent perfectly to grip the edges of the inserted handle.



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16. Getting close. Just making sure that everything fits and looks factory. once I was satisfied here i used a center punch to mark the hold position for the mounting screws on the top and bottom of the handle assembly. I then drilled out the holes with a 1/8" bit, then used #8 self tapping screws to create the thread. In final assembly, I used #8 3/4" black automotive screws so that they would blend in.



17. Done. Have a couple beers and celebrate the fact that my Rover has 1 less way it can let me down.

