Tailgate Power Lock (by pciley from titantalk.com posting #18471)

For this project you will need the following materials and tools:
Dont spend more than $40 on materials. If you have all the electrical connectors, the actuator shouldn't be more than $15-20

-(1) Power door lock actuator Similar to Pic 4
-Electrical tape
-Butt connectors (water proof if available)
-(2) T-taps, or other method of splicing
-Zip ties
-Flat head screwdriver
-Phillips Screwdriver (#3 or #4)
-*If you have spray-on bedliner, you might need a T30 torx bit
-(25-30) ft of 16 guage two conductor wire (speaker wire works fine)
-Quick disconnects (crimpable wire ends that snap together)
-Knife/ exacto
-Plumbers tape (3/4" wide Metal strap with various size holes in it, flexible) Pic 05
-10mm socket/ wrench
-(2) Small screws / bolts and matching lock nuts/ washers, no larger than a #10 metric (I used #10-32)
-(2) 1" Sheet Metal screws slightly larger than mounting holes in your actuator (mine were metric #8)
-Light duty drill (a 13V Makita worked great)
-Small drill bits, one slightly SMALLER than the diamater of your sheet metal screws and one slightly larger than the small bolts
-Small crimping tool for butt connectors and quick disconnects
-Wire strippers

Optional:
Flashlight
Wire coat hanger or short fish wire (at least 3 ft.)
***Most actuators come with a rigid metal strip with multiple holes to aid in mounting the actuator. If yours doesn't come with this, you can just use plumbers tape.**

1. Put tailgate in down position, remove access panel (8 phillips screws or T30 torx screws, depending on bedliner). Pic 00

2. Depress tabs on plastic yellow clips and open to release latching rods. Pic 01

3. Remove the two 10mm nuts holding the handle lever in place. With the latch rods out of the way, you can lift out the handle lever assembly. Note: I have also removed the lock cylinder and pin for the pictures, this is NOT necessary.

4. Cut a piece of plumbers tape / metal strip about 4". You will trim to fit. Pic 6

5. Bend the cut strip from Step 4 as shown in Pic 7 and 8. Take your time getting the bends aligned similarly with the holes, the placement of the

holes is very important.

6. Attach the plumbers tape to the actuator as shown in Pics 09 and 10. The pictures show the plumbers tape coming off the SAME side as the solenoid bulge on the actuator. You will need to attach the plumbers tape on the OTHER side, as shown in Pic 17. Sorry, didn't find that out until I was mounting it later. It is much easier to mount inside the tail gate when they are on opposite sides.

7. Picture 11 shows the entire handle lever and lock assembly together as they are installed inside the tail gate. Picture 12 is a close up of the lock cylinder and rotating pin. Picture 13 is a CLOSE UP of the lock pin that you will be attaching the actuator, via plumbers tape, to.

8. Picture 14 shows how the Actuator and Plumbers tape slips over the rotating lock pin. Note: The protruding edge of plumbers tape on the left will need to be bent back or trimmed off or it WILL interfere with the handle lever once inside the tailgate.

9. Mount the "rigid metal strip with multiple holes" that should have come with the actuator, on the bottom mounting hole of the actuator. If yours didn't come with this, cut an appropriate length of plumbers tape to span between two of the metal sections on the inside of the tailgate. The Sheet metal screws (of slightly larger diamater than the actuator's mounting holes) are used to mount the metal strip to the LOWER mounting hole on the actuator.

10. Place the actuator assembly (complete with plumbers tape and metal mounting strip on bottom mounting hole) as shown in Pic 17 into the tailgate. You will be mounting UNDER the metal brace closest on the right side of the handle lever and lock assembly.

11. You will now slide the actuator's bent plumbers tape piece OVER the rotating lock pin as shown in Pic 14. Holding the actuator in place find an appropriate mounting angle that allows the lock pin to rotate in its full range with the least amount of resistance. The actuator should be almost STRAIGHT (with projecting arm pointing towards front of truck).

12. Holding the actuator in place, determine where you will need to drill a hole in order to secure the actuator to the metal brace using a sheet metal screw and the actuator's UPPER mounting hole. You might use a screw driver or punch and a hammer to pre determine the location of hole to be drilled.

13. Drill the hole. Use a 1" sheet metal screw through the metal brace to mount the actuator using its UPPER mounting hole. Mine was here, marked with a screw barely threaded in Pic 18

14. The rigid metal strip that extends from the LOWER mounting hole of the actuator should reach the metal brace on the tailgate to the Right of the one you just drilled through. Drill another hole in this second brace to attach the rigid metal strip to. You will use one of the bolts/washers/lock nuts. You might need a slightly larger drill bit for this hole than used for the sheet

metal screw, as the bolt should not have to be tightly threaded through the brace. Pic 20

15. Pictures 21, 22, and 23 show the actuator as it is mounted inside the tailgate. NOTE, my handle lever assembly is still removed for the pictures so the actuator will be easily visible.

16. Replace the handle lever assembly inside the tailgate, Making sure the slot in the black plastic tab fits securely over the rotating lock pin. Tighten down the 10mm nuts for the handle lever assembly.

17. TEST the handle lever assembly with the handle on the outside of the tailgate. Test the lock with your key. Make sure everything moves properly and doesn't have too much resistance.

Now for the wiring...

Wiring:

You can route the wires how you see most fit to your taste. The most hidden way would be to fish the wires down through one of the drainage openings on the bottom of the tailgate, behind the skin where it won't be seen, then anchor it on the bottom of the tailgate all the way to the corner, go under the hinge, then down under the truck. I had a HELL of a time trying to get the wires through (very cold fingers, fussy coat hanger, etc) so I said forget it. I used a nice factory hole on the side of the tailgate.

Special Note: If you would like the tailgate to unlock with your passenger door (two clicks of your keyfob to unlock) then while reading the instructions, switch "driver's side" with "passenger side." All routing of wires and minor disassembly should be just as straight-forward

Here's the process:

1. Anchor the wires inside the tailgate so they won't move around. I used an adhesive zip-tie mount. Pic 24

2. Route the wires either through one of the weap (drainage) holes at the bottom of the tailgate, or come through the side near the hinge where there is ALREADY a factory hole. Pic 25 (I used rubber tubing that came WITH my actuator to conseal the wire / look more factory. Pic 25

3. Once the wires are hanging behind the bumper, under the truck, cut them and crimp on your quick disconnects. This is where you will unplug for tailgate removal. Do NOT anchor the wires on the removable side. You will be tightly anchoring the other free end of wire that you are connecting to, the wire going into the cab. When the quick disconnects are connected together, the wire will be tightly held up and out of sight under the truck bed.

4. With a free length of wire, ~20 feet, start to run the wire from the rear bumper forward. Leave some slack, you can always trim off later. Follow the existing wire bundle in the black split loom. Zip Tie your wire along this. Black zip ties look the best. Make sure you tie it at each bend, and every 12 inches or so.

5. When the factory bundle turns towards the center of the truck, KEEP routing your wire forward on the driver's side frame rail. Do not follow the bundle at that point. You will use existing anchor points on the frame rail to mount the wire, OR use some handy adhesive zip-tie mounts (like Pic 24)

6. If you are laying under the truck and looking between the bed and the cab on the driver's side you will see a rubber plug with a face about 1" in diamater. (I have a king cab, the location might be SLIGHTLY different on the CC).

7. Taking note of that plug's location, go in your cab and fold the rear seat in the up position (seat bench stored against the back wall of the cab). If you pull back the carpeting that covers the back cab wall, starting in the lower right, you will reveal the other side of that rubber plug (about 1/2" diamater on this side). Pic 26, 27

8. Push the rubber plug out and poke a hole in the very center to feed your wire through. After all your wire is pulled through, put the plug back in.

9. Tuck the wire down and under the edge of the carpet, running along the driver's side floor edge. Carefully push the back wall carpet back in to place.

10. Remove the two sections of door sill covering the front and rear door floor edges on the driver's side. They just PULL out. Don't worry, if the plastic panel clips stick in the bottom of the cab you can pry them out and reattach them to the door sills later. Its not a problem. Start at the very rear of the cab and pull straight up on the sills, working your way forward. You will have to manipulate them by pulling back towards the bed at the end when you have reached the front.
Door sills removed: Pic 28

11. Simply route the wire through the HUGE gap in the floor between the cab's tub and the carpet. Try to go through the white plastic wire cover that goes along the driver's seat base. Pics 28 and 29

12. Remove the driver's side floor kick panel. There is one plastic clip UNDER the E-brake pedal that needs to be removed with a flat head screwdriver or panel puller tool. When the clip is out, JUST PULL back and to the right, manipulate it without flexing the plastic. It comes off pretty easy. Pic 30 Note: I have aftermarket door locks (XE) so my wires are different color)

13. Locate your door lock wires, coming in to the cab through the rubber tube between the door and the hinge area.
The wires going to your door lock actuators will be green and purple (violet).

14. Splice into each wire and make a TEMPORARY connection for now to test the polarity of the wires.

15. Go back to the loose ends of wire under the rear bumper and crimp on your other quick disconnects on the wire that is running under the truck to the cab. Connect with the wires coming from the tailgate. Anchor the wires coming from the cab tightly under the rear behind /under the taillight, or where ever you feel appropriate. Make sure the wires are tight enough to keep the independent end tucked up and out of sight and easily accessible to unplug when you want to remove the tailgate.

16. Make sure your tailgate is unlocked by key and your truck is unlocked/disarmed. Hit the lock button. If the tailgate locks, you can go make your connections permanent in the cab and clean everything up. If the tailgate unlocks, then go switch the wires and try again before putting things back together.

17. Go back to tailgate and watch inside the access panel when you repeatedly hit lock and unlock. Look for anything that shifts around when the solenoid moves. Does the wire strap stay over the rotating key pin? Does the handle still operate normally and the lever is not being interfered by the metal strap? Test everything, give your connections and zip-ties a once over and use ELECTRICAL TAPE over all connections to make more water/mud resistant. You will be glad you did later.

18. Put everything back together, you should be done.

I most likely forgot something, so let me know by post or by PM and I will be happy to walk you through this.

If you are local to me, come on by and I will be glad to help you out.

I was going to estimate the install time, but everyone's will vary. Initially, I spent two hours on the project, stopping to jot down quick notes for the How-To and to snap pictures.
Then, I went back and spent another hour cleaning things up and making everything look alot more presentable and took some better pictures. All together I spent about 3 hours on the install.

This should take you between 1 and 3 hours depending on your ability, hopefully less since you are not stopping to make a tutorial.

On a scale of 1 to 10, 1 being changing a flat tire and 10 being installing your own remove start alarm (pretty light scale ) this would be about a 3. Its a cinch, really.
The reason I went in to so much detail and had so many pictures was to make it easy for everyone else to duplicate with the least amount of "WTF?'s" possible.

Good luck! Hope everything goes smoothly. Again, contact me for help.