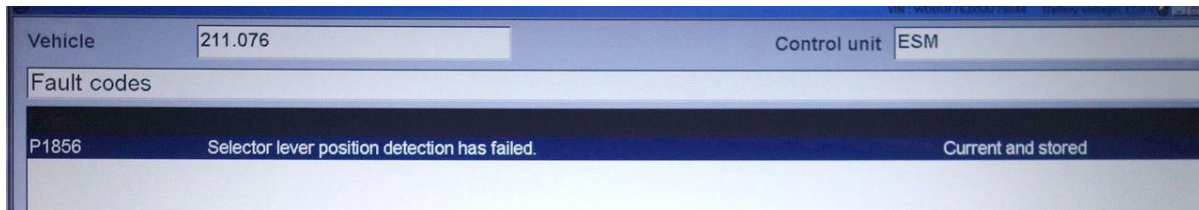


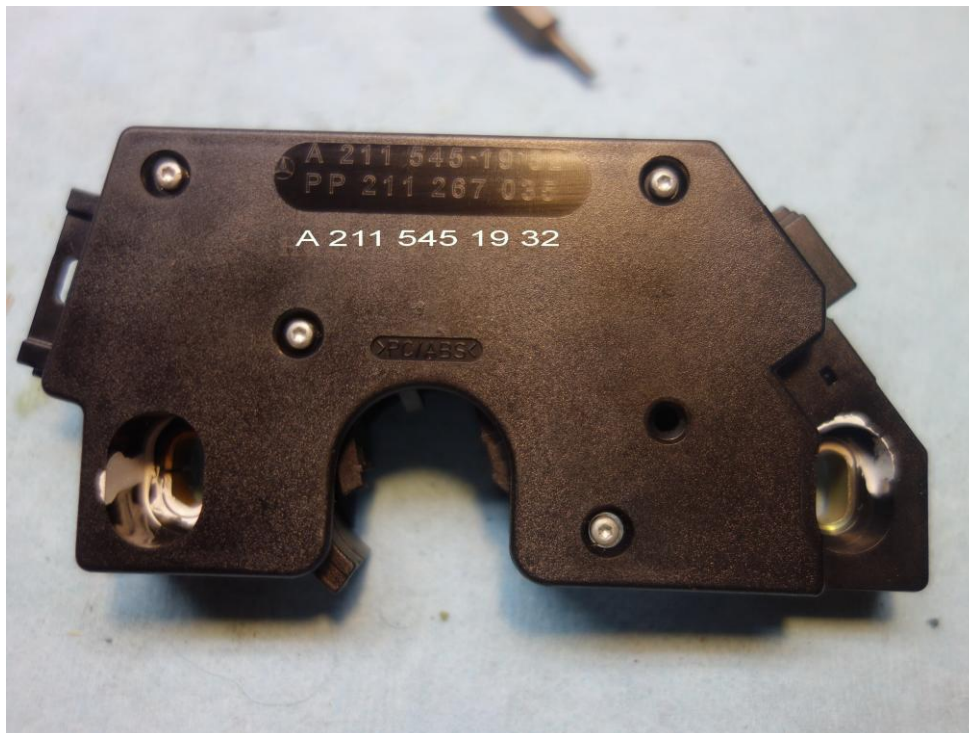
Instructions for replacing the Lever Position Detection Module located on the Electronic Shift Module. This is a 2005 model W211 with the sliding cover console. *Earlier hinged covers have a different removal procedure for the console!* Photos have been rearranged for clarity but you may notice oddities such as screws removed in an early photo but still installed in a later photo. This was due to additional photos taken during reassembly. When working on the module, push the release button so you can move the shift lever when working around the lever.

Symptoms: Car went into limp mode, stuck in third gear, shift lever would not go into Reverse or Park. Key turned off then back on, symptoms cleared. Returned home to diagnose.

Troubleshooting: Using diagnostic system, the following code was found and would not clear:



Research showed the following module was most likely at fault (often the opto-sensors):



The module can be replaced with a repaired module or your module can be sent to a repair shop with the attendant shipping delay. I purchased a repaired module off of Ebay for \$135.

To remove and repair the Electronic Shift Module (ESM) perform the following:

Squeeze the boot at base of shift lever and remove:



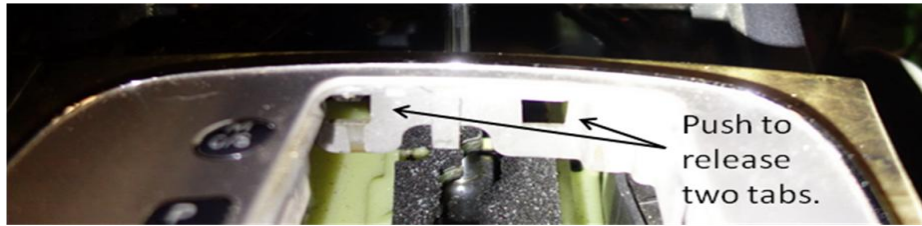
Pull boot upward to expose the locking nut on the shift knob:



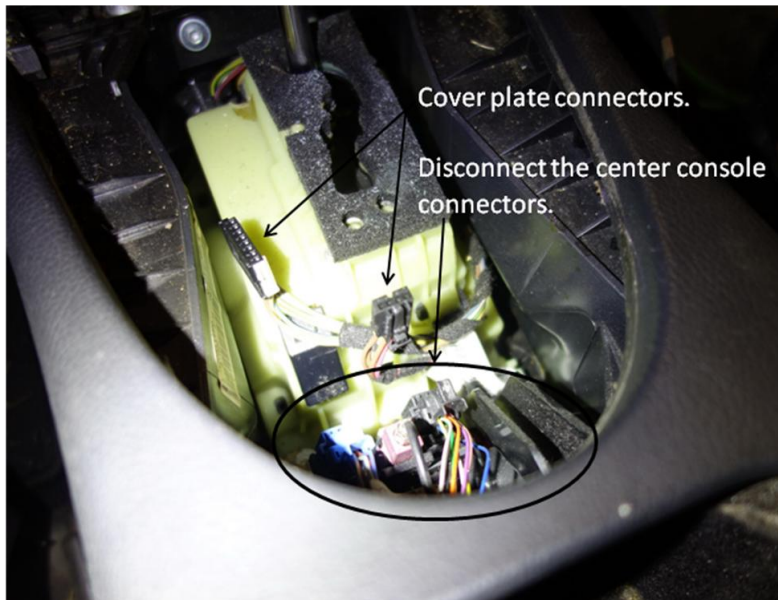
Twist locking nut to release. Lift shift knob straight up; do not twist!



To remove cover plate, release the two tabs located in front of cover and lift. You can then disconnect the electrical connectors underneath but there is not much room available so use caution.



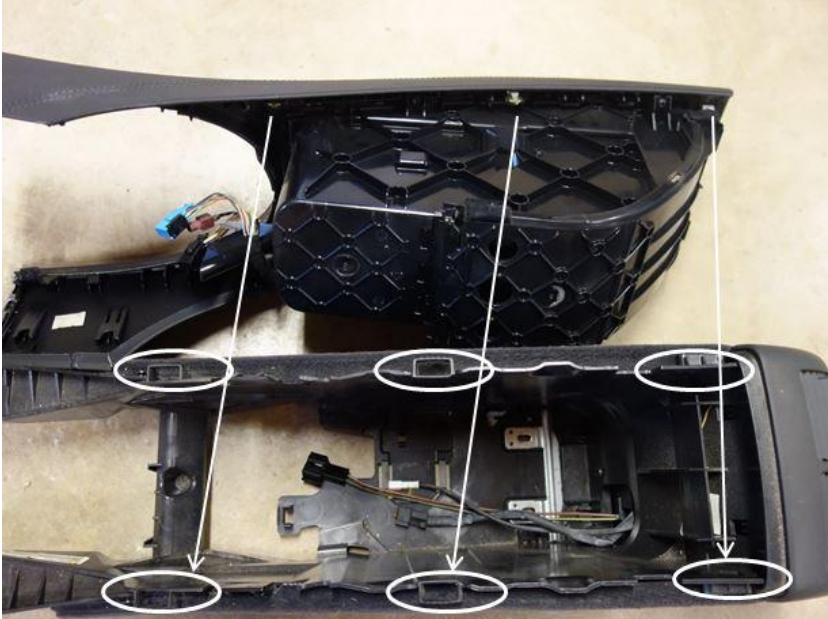
Disconnect the center console connectors:



Remove the two outer screws in the front:



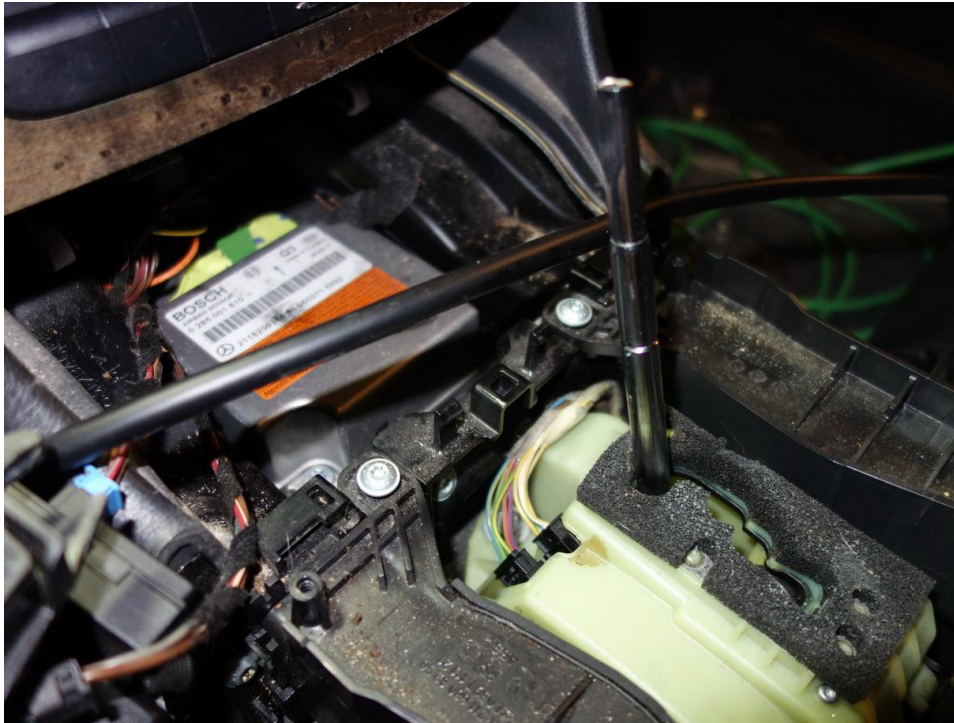
Remove upper half of console by lifting straight up. It is held in place by six each metal clips that fit into plastic fittings in the console bottom.



Move ashtray out of the way by releasing two tabs with a small screwdriver. This photo is out of sequence; the two inner screws should still be in place at this time. I had already removed the two inner screws and realized I could not remove the lower half of the console until I moved the ashtray out of the way.



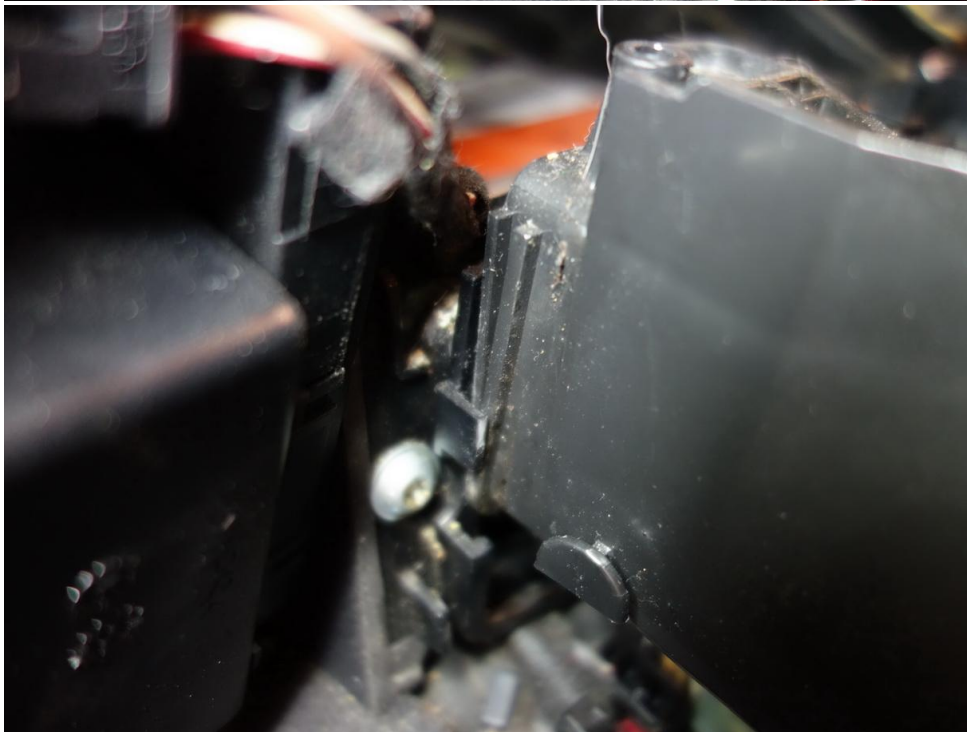
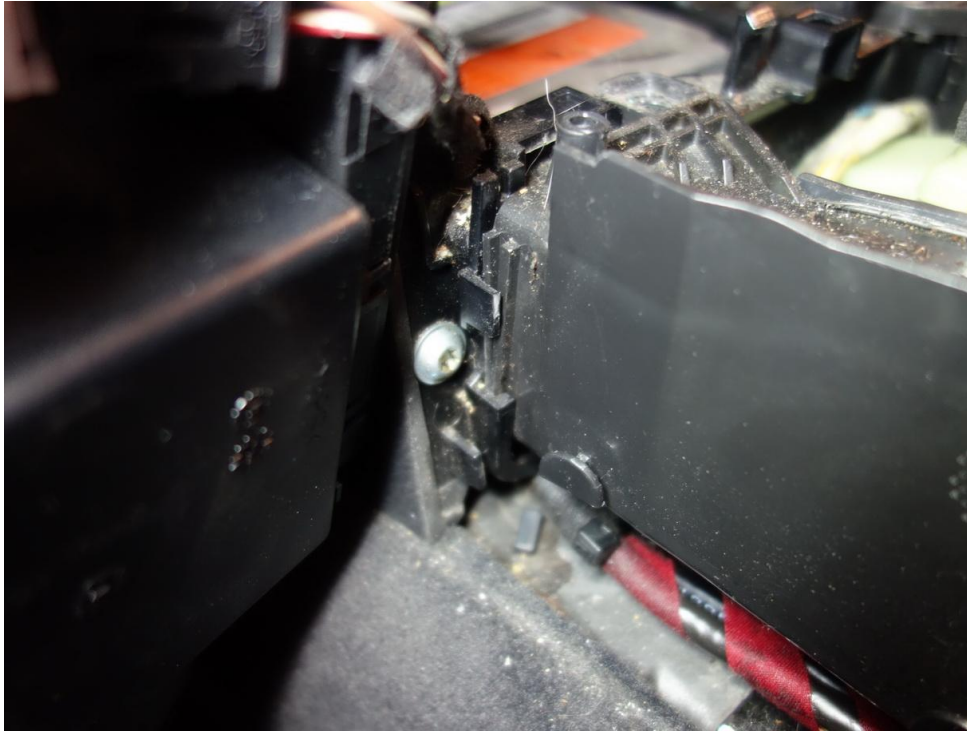
Remove the two inner screws at the front:



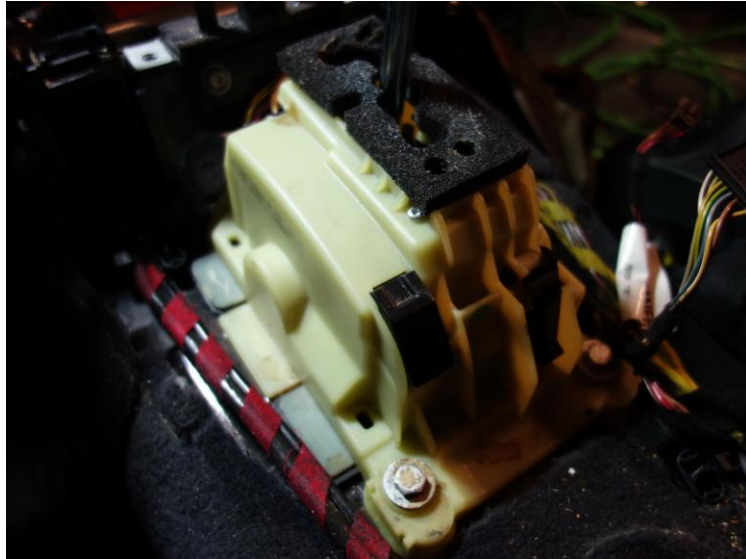
Remove two screws at rear and disconnect electrical connectors:



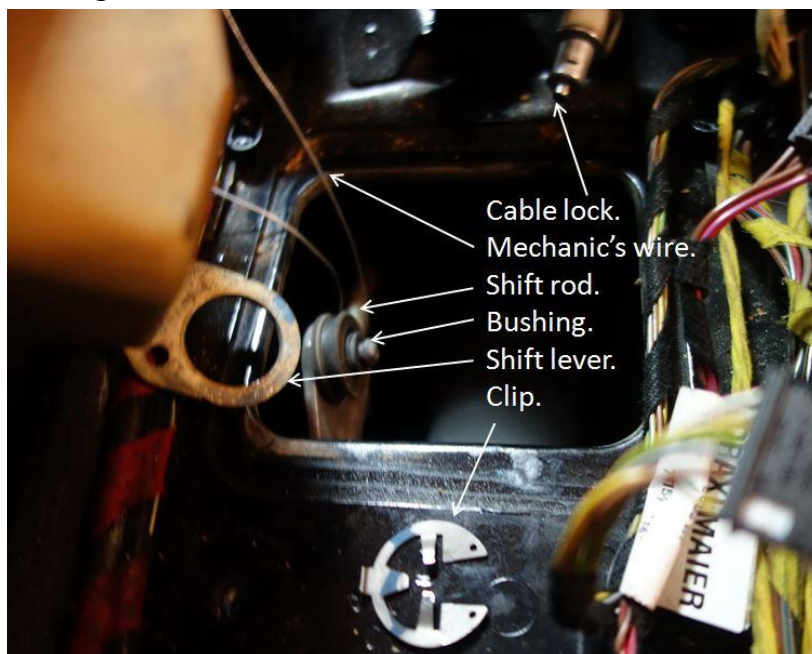
Lift front of console to release the “tabs and slots” from the center dashboard and remove lower half of console:



Remove three bolts holding shifter module to the transmission tunnel. There are three electrical connectors in the front plus a cable; release the cable by pushing down on the plastic tab and rotating the metal fitting 90 degrees. Cable fitting is “righty-tighty, lefty loosey”, so rotate CCW to release. Remember, it is reversed when sitting in the car so rotate the top of the fitting towards the door on the right-hand side of the car. There is not much room there.



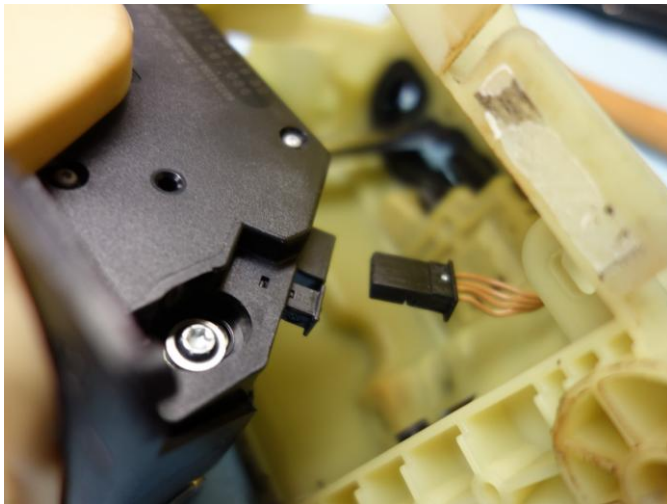
Lift shift module, tie shift rod up with mechanic’s wire (or a coat hanger) to prevent the shift rod from dropping into the transmission tunnel. Remove clip (don’t drop it!), and slide shift lever and bushing off of the shift rod. Note I did not follow the last instruction; leave the bushing in the end of the shift lever as it is a PITA to reinstall the bushing into the shift lever!



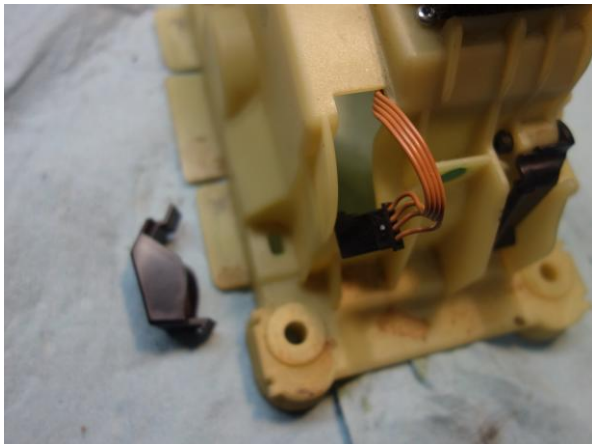
Upper shell is glued to the lower mount; I used a putty knife and small(!) hammer to break the seal.



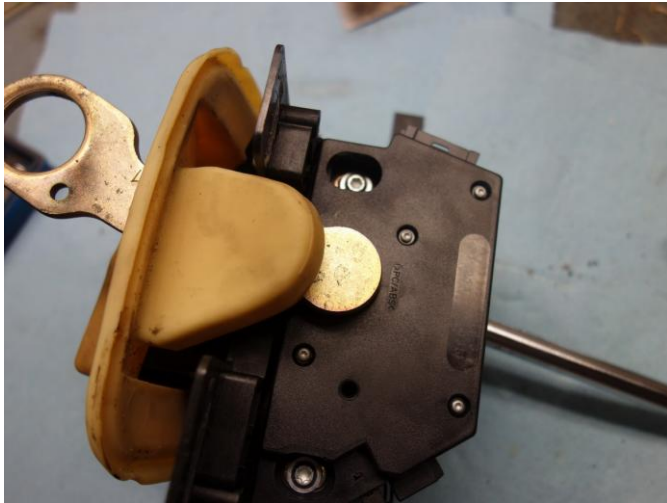
Lift upper shell and remove connector to the +/- side-shift switch.



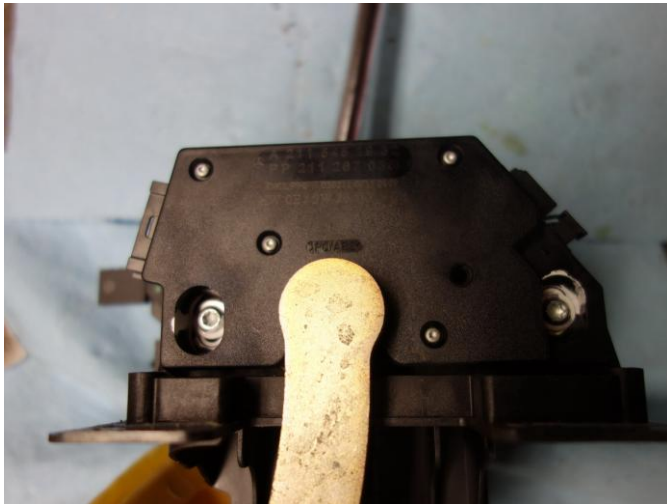
To reinstall that connector later, remove the plastic access cover on the upper shell.



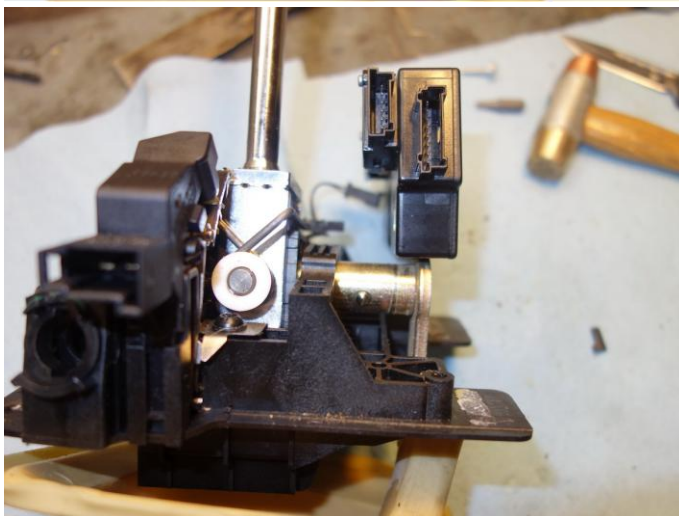
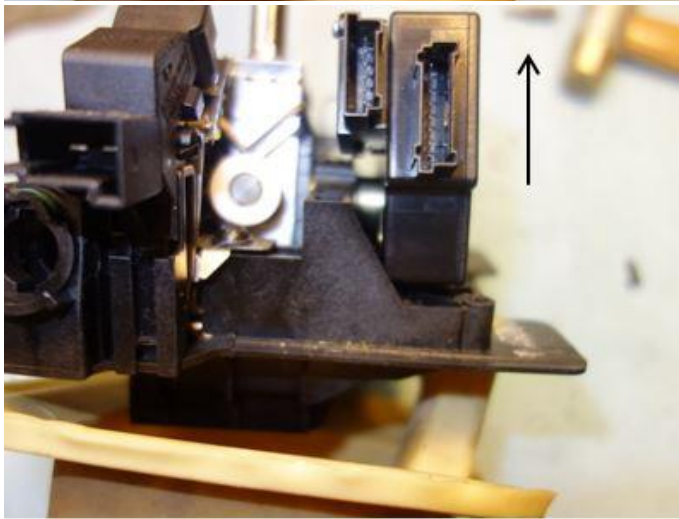
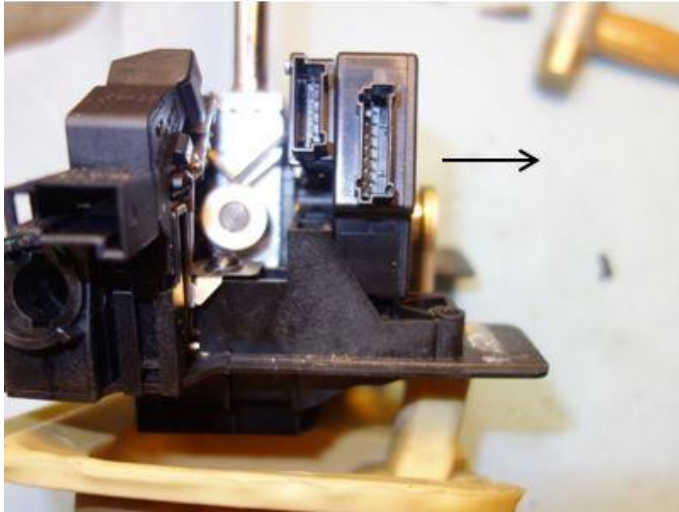
Pull rubber boot over shift lever.



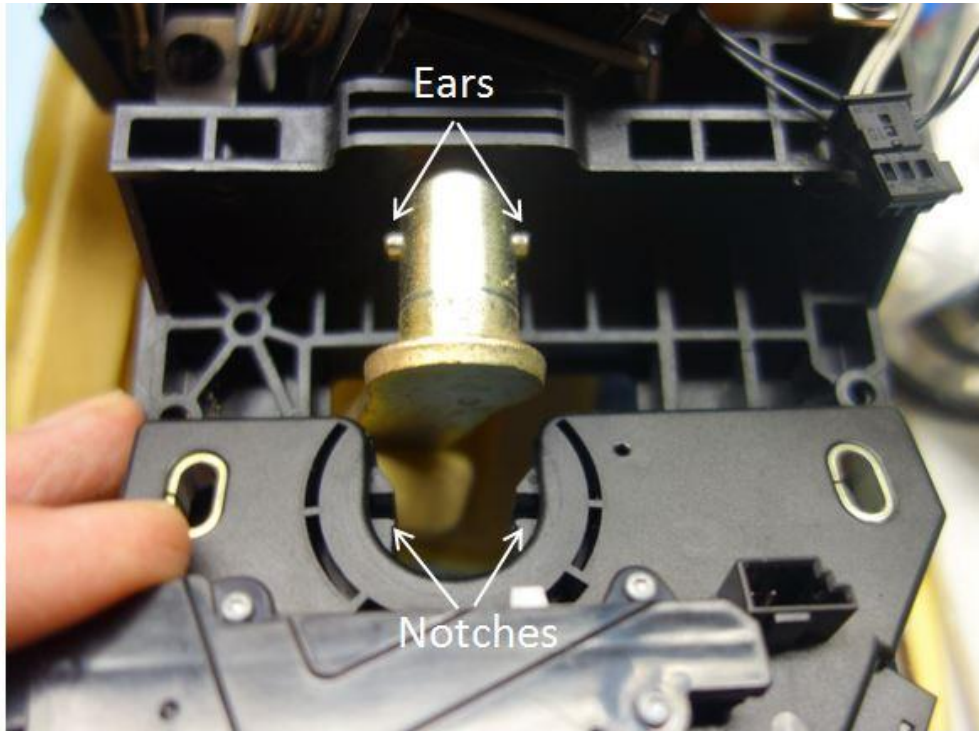
Mark screw position so you can match the new part to the old calibrated position.



Remove the two torx screws, slide module away from the chrome shift lever, and lift off. I recommend you have the chrome shift lever in neutral position to make this easier. Do not force or you can break the tabs to the position sensor!



The two ears fit into the two notches to mate the shift lever axle to the shift position sensor.



Installation is literally the reverse of removal. I applied a light coating of silicon seal to glue the upper and lower shift module shells together immediately before bolting down. After the bolts are torqued, the upper and lower shells are held tightly together. With the upper black access cover removed, you can easily use a pair of needle-nose pliers to reconnect the electrical connector for the +/- side-shift switch and then reinstall the upper access cover.