

Problem as Experienced:

When parking and powering off (or on) the car, the message on the dash is received as "Transmission – Secure vehicle with parking brake when stationary, have problem checked by your service partner"

What has happened, as I have learnt, is that a small spring has broken inside the gear selector unit that holds a plastic clip in place, when the selector is in P. This WILL NOT affect the vehicle ability to drive, as the clip is only used in P. When in D or R, car will function normally. The vehicle computer throws an error as the actual transmission is in P, while the gear selector is giving info that it is in N.



Fixing Error code:

Error Code: "420106" - Shiftlock solenoid: Selector lever wrongly not locked in P.

Faulty Part: 25168483098 (gear Selector assembly)

This guide based on specific vehicle:

2016 X1 F48 – sDrive 20D (B47 Engine Block)

Right hand driver position – South Africa.

105000km

NOTE:

I am a technical guy by nature, but this can be done if you have a bit of confidence. Please contact me if you need some assistance.

Tools Required:

- Hex20
- Size 13 socket
- Size 13 spanner
- Size 10 socket
- Size 10 spanner
- Small flat screwdriver
- Jewellers flat screwdriver
- Plastic trim removal tools

Put the car in Neutral (N) and park break ON before we proceed. If at any stage you knock it into P, you must press firmly on the yellow plastic tab on the right of the selector, depress the selector trigger, and pull back into N.

1. Disconnect the battery.

If you have had a X1 F48 for long, you know the design of the battery placement is terrible. Pop the hood / bonnet and find the 2 pin-clip studs keeping the leaf guard in place: One on the left, one on the right.



Remember to pull out the centre pin with a screwdriver or trim-tool BEFORE trying to pull the whole clip out:



The leaf guard can pull up and out of place. This will expose the negative terminal of the battery which is all you need to disconnect. Size 10 socket.



2. Remove the gear selector boot.

Simply pull the clips from the underside, and it will clip out and up.



3. Disconnect the gear knob:

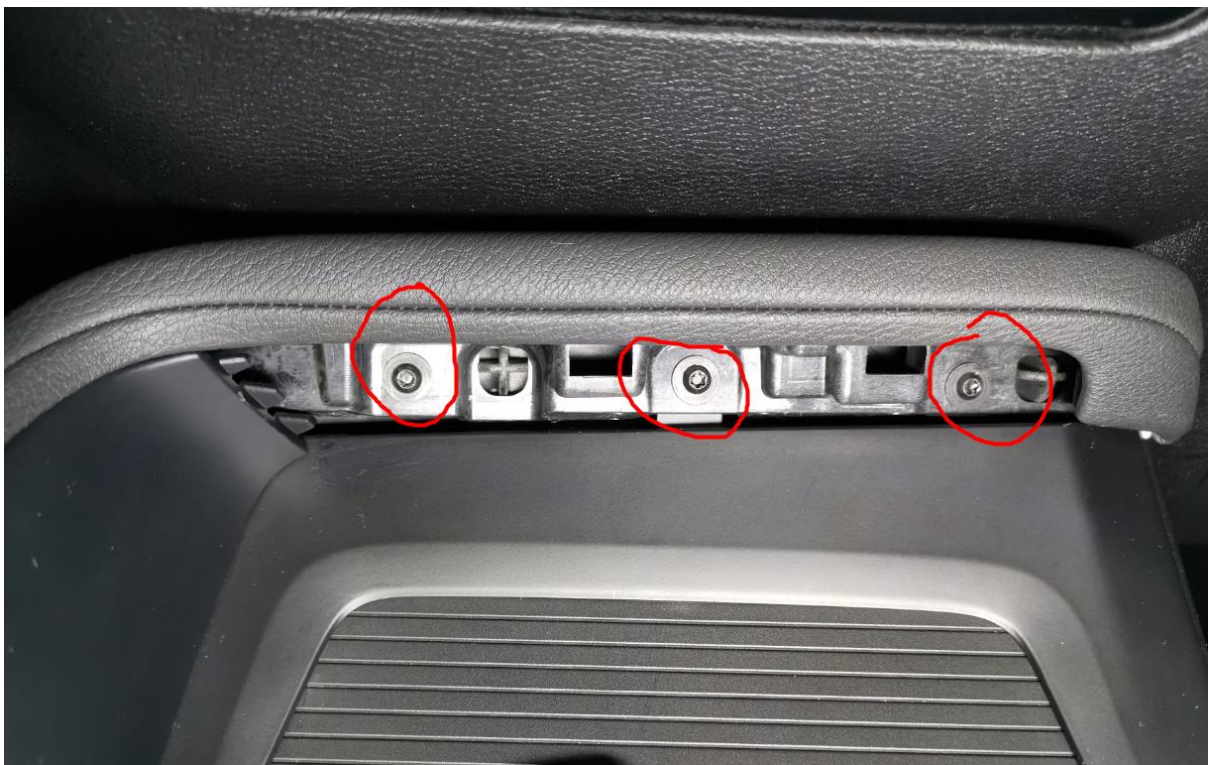
Reach under and disconnect the white electrical clip for the gear knob. Then, with the selector in D or N, hold the trigger used to change gears, and pull directly up. This will require some force – don't be shy but keep it strait. The whole knob will pop off and up.

This step is not critical but will make the process much easier.



4. Remove centre Console

Remove trim and expose 3 hex screws in the centre above cup holders. Remove all 3 screws.
(Hex20)



Remove trim and expose 2 hex screws on the passenger side of centre console. Remove both screws (Hex20) This can be done with the passenger seat in the car. (Put seat all the way back, and in lowest sitting position)



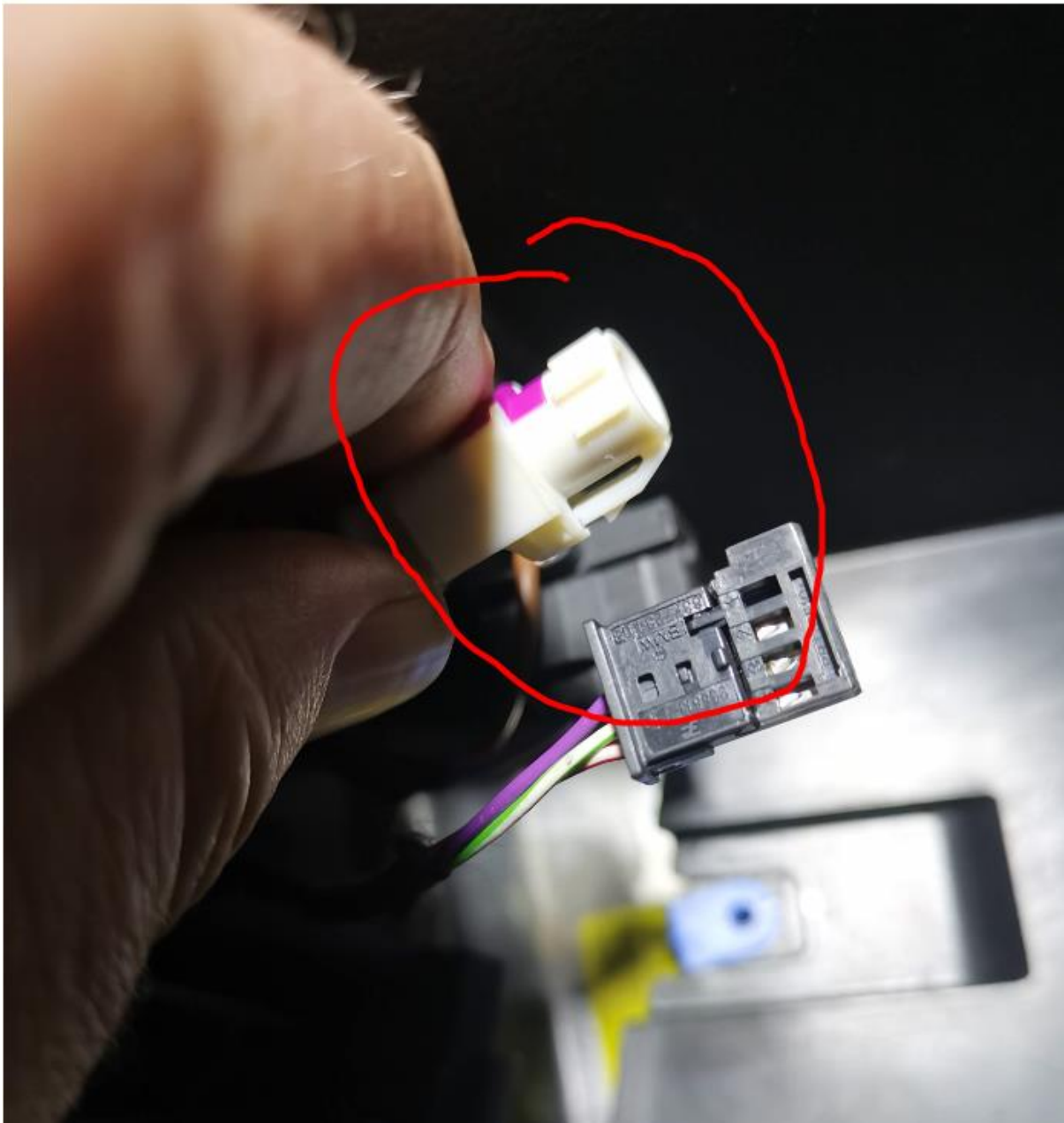
Remove plastic liner in the centre storage and expose 1 hex screw.



Use plastic trim tool, to pull forward the face plate with USB, Lighter socket and Audio. There are 2 clips at the top that will pop off.

Remove all 3 electrical connectors.

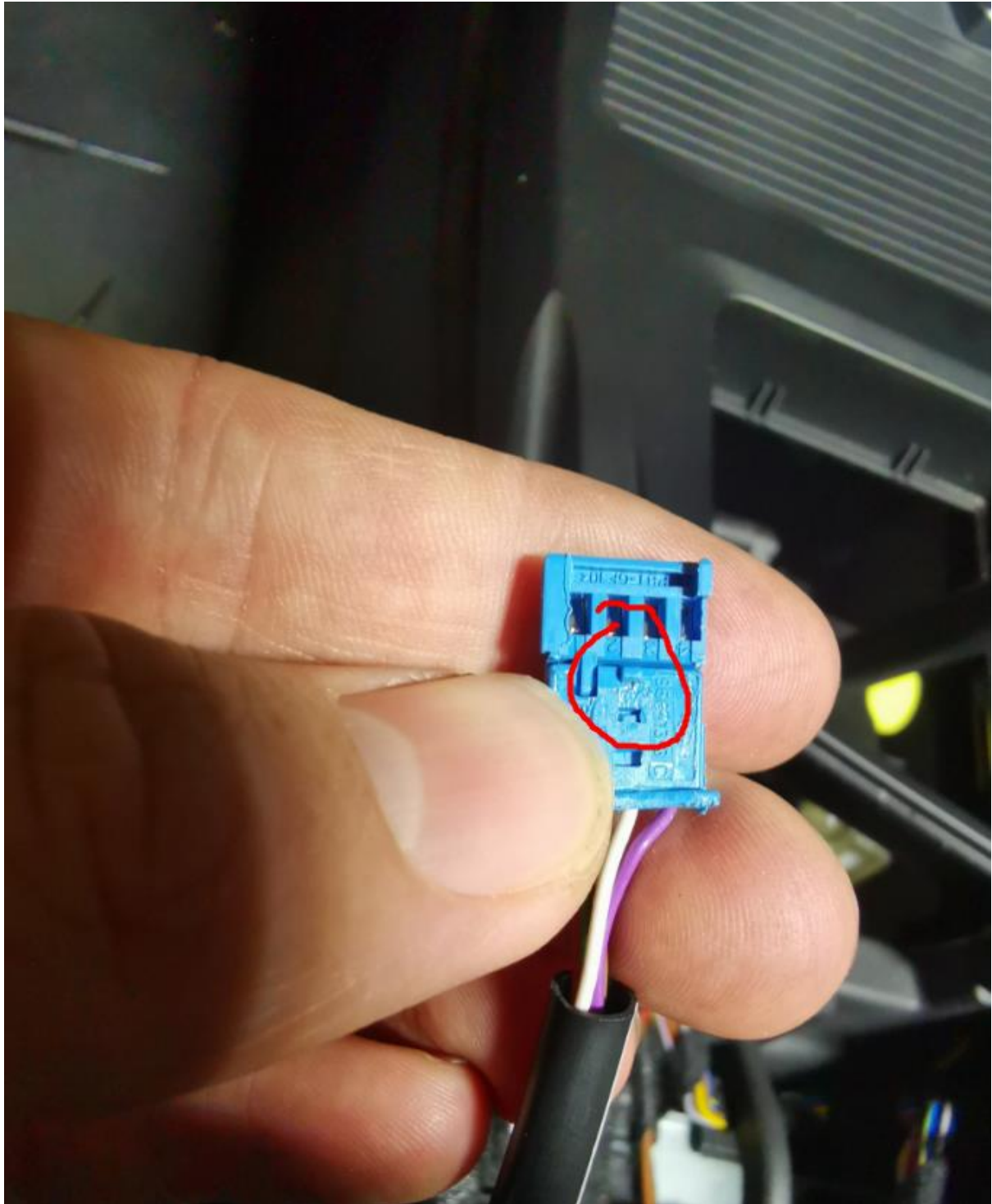
NOTE – White connector for the USB has a clip on the underside that will need to be squeezed to remove.



Now the full piece of dash with the iDrive controller can be removed. There are clips all round and the whole unit will come out.

As you can see, my car has the 4pin iDrive CiC connector.

The blue connector for the iDrive is VERY tight (it was in my car) and the plastic seems very soft, so be careful. I used a tiny / jewellers screwdriver to push the clip back to get it out.



Remove the remaining centre console with drive style and park break buttons. There is 1 hex screw to be removed (Hex20)

The whole piece will unclip and lift away. Carefully lift over gear selector.

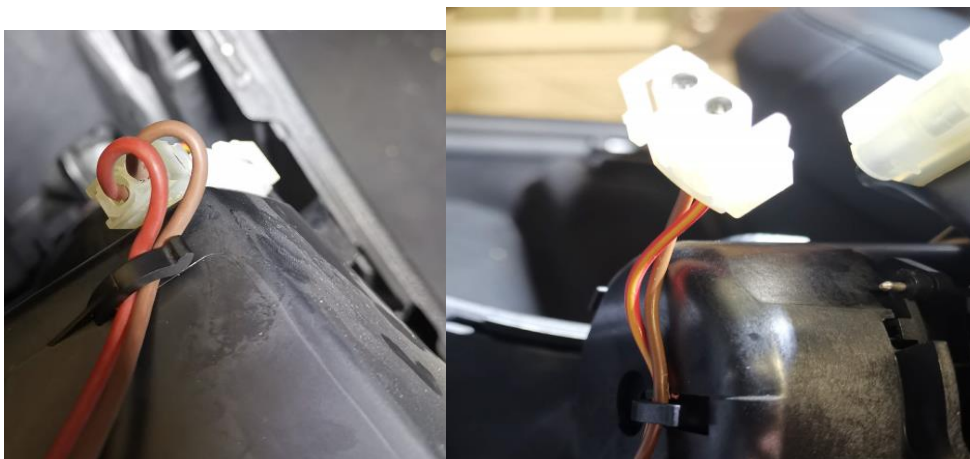
2 electrical cables will need to be removed for drive style buttons and park break / e-brake.



5. Remove Cup Holders:

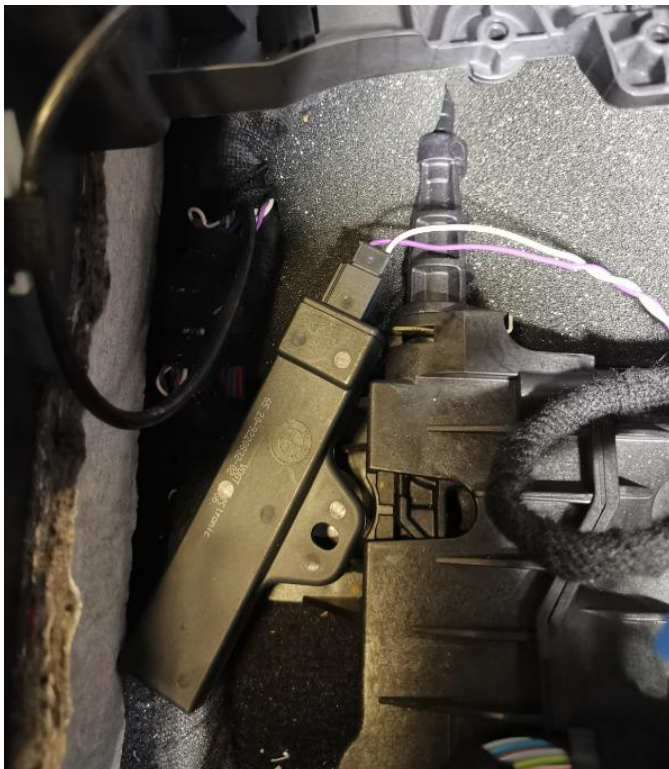
There are 2 clips as the back of the full unit. Pull form the back, and the whole assembly, will rotate forward. Once the assemble is in the vertical position, it can be lifted out of place.

There is 1 power clip for the lighter socket. This is a squeeze clip.



6. Carefully Move all Wiring out the way:

Take note of the route the cables go, and move them all out the way. There are may small plastic clips the keep the cables in place, these can pull off.



7. Remove Rear Seat AC Vents / Cubby Storage

The pictures I took here were too dark to use, but here is the explanation.

From the rear seats, centre console, remove the AC vents. On some variations of the car, this may be a storage cubby hole. They will just pop off.

Once those are off, just pop off the whole face plate of the centre console rear section.

This will expose 4 size 13 bolts. Remove all 4. You will need to use a combination of spanner and socket here to get the bolts off.

8. Remove trim in foot wells:

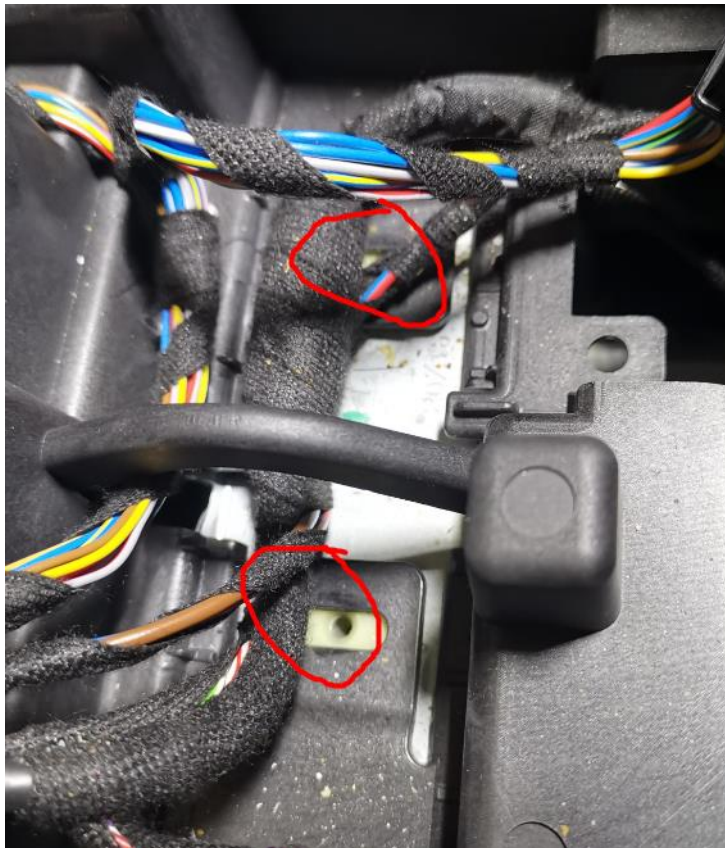
Again, it was too dark and bad angles to get good pictures here, but you need to remove the trim in the foot wells on each side.

There will be 1 hex20 screw on each side. The driver's side had 2 clips, and the whole piece popped out.

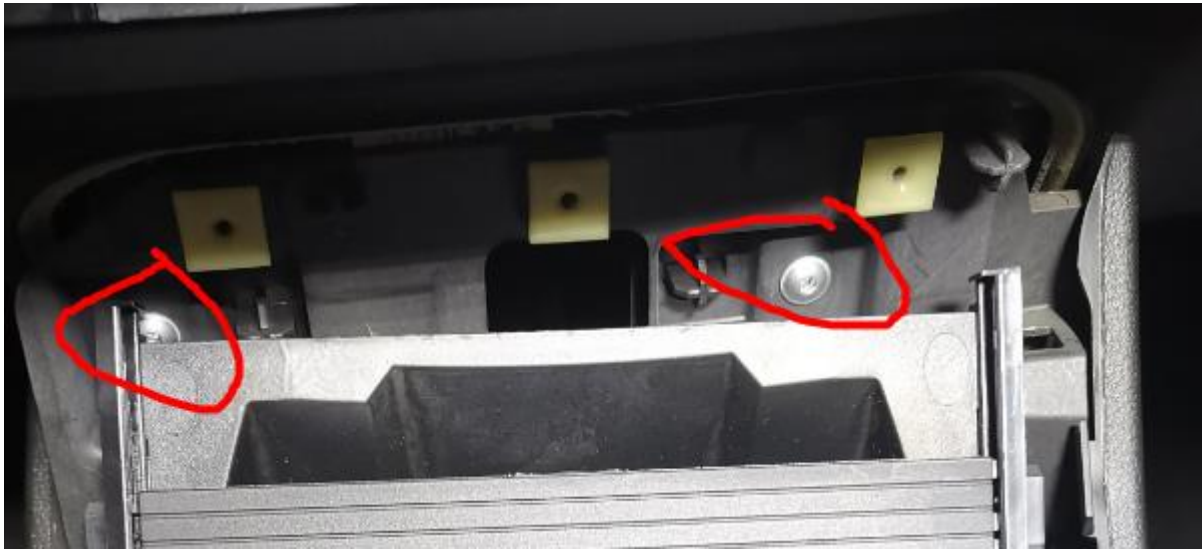
On the passenger side, once the screw is out, I just pulled back the trim, to allow the centre console to move away.

9. Remove Full Centre Island Console

Once the 4 size 13 bolts have been removed, remove 2 more hex20 screws from the centre console.



Remove the 2 silver / grey hex20 screws from the front of the console:



From the rear seats, pull up on the whole centre island, and it should pop up and pull out. Make sure you have not missed any cables, plugs or sensors attached to the centre island. It is a bit heavy, lift carefully over the gear selector and out the vehicle.

10. Removing the Gear Selector unit:

First, remove the lock clip holding in the actual gear selector cable. It can be pried back with a flat screwdriver. Don't worry, this **will** make the cable lose.



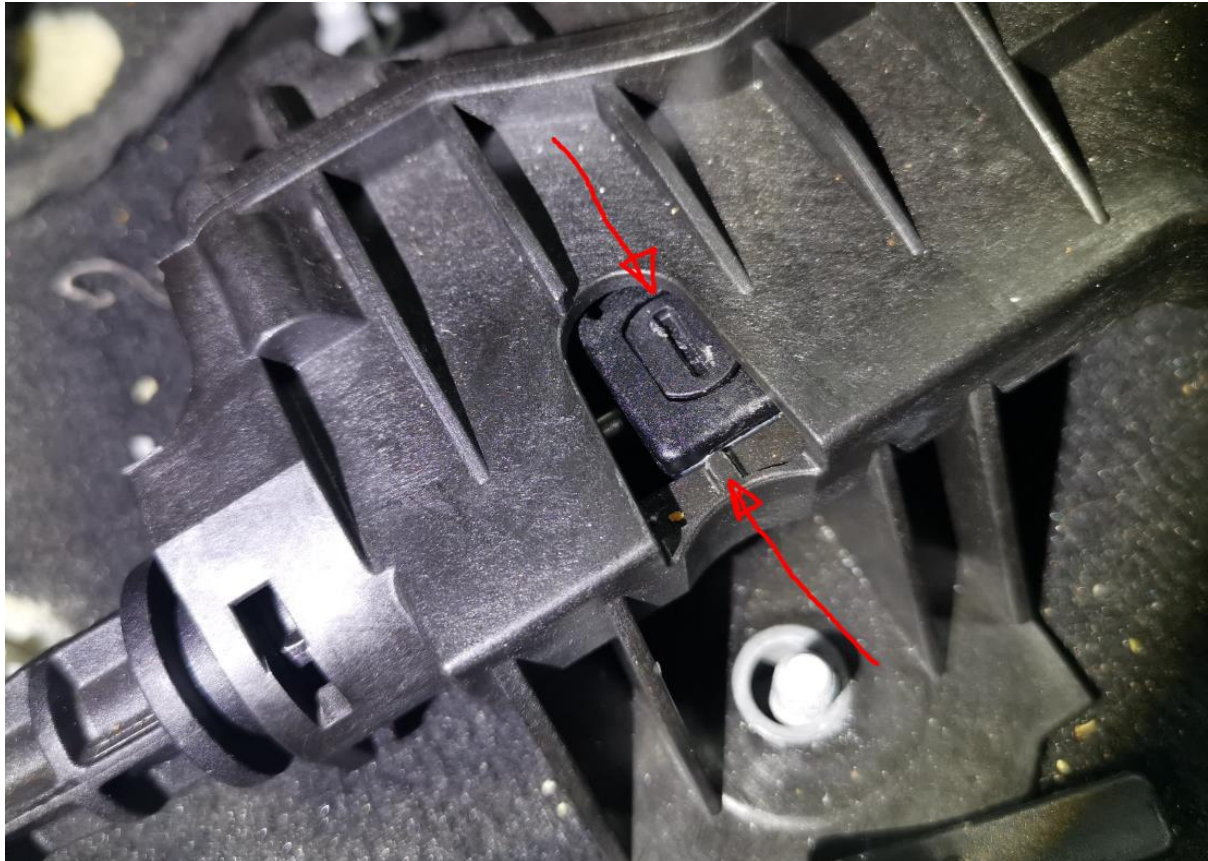
Remove all 4 size 10 bolts holding down the gear selector unit.

Remove all plastic clips and wire holders.

Ok – So this gets a bit complicated:

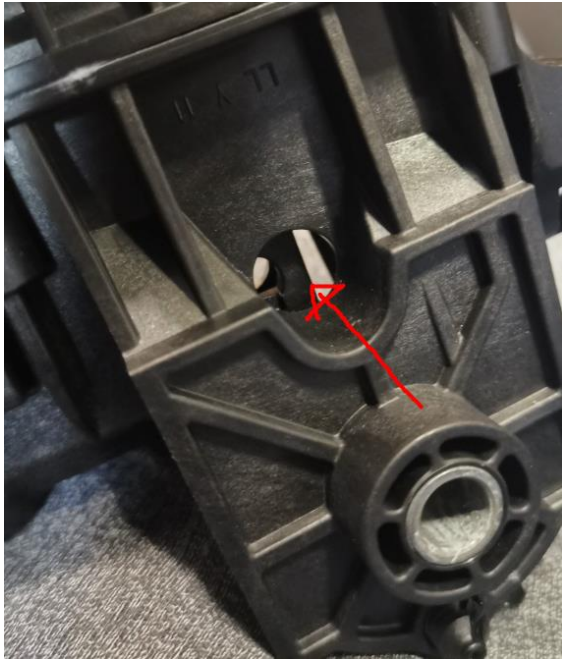
You need to find a happy place between gears and pulling the cable to FULLY expose this semi-round clip. DO NOT TRY SCREW IT.

The plastic tab on the housing, must line up with the slot on the tab. (I couldn't get a picture and get it lined up at the same time – but it must line up.



Once lined up, you need to lift the whole assembly, and rotate anti-clockwise so you can see the underside.

Where you have lined up this clip, you will see a small tab to be clipped off. This will pop out the whole clip, and the gear selector cable will come free. (Use small flat screwdriver)



Now you can take the whole gear selector unit inside your house, find a comfortable place to sit with some good light.

11. Disassemble Gear Selector Unit:

There are 11 or 12 silver screws, Hex20, remove all those screws and separate the unit into 2 halves. Be careful of the solenoid that makes the base of the unit tight together.

Remove all the moving parts – there is some grease on these parts.

Disconnect the wire for the solenoid and remove the solenoid.

Remove the entire white lever – You can press the small axle from the outside of the housing, and it will pop out. The axle, plastic lever and spring will be attached.



With this out, you will be able to see if the torsion spring is broken – mine clearly was. I carefully removed the spring and stretched it out 1 full revolution. It will need to be **past** 180degrees to push the white lever up.

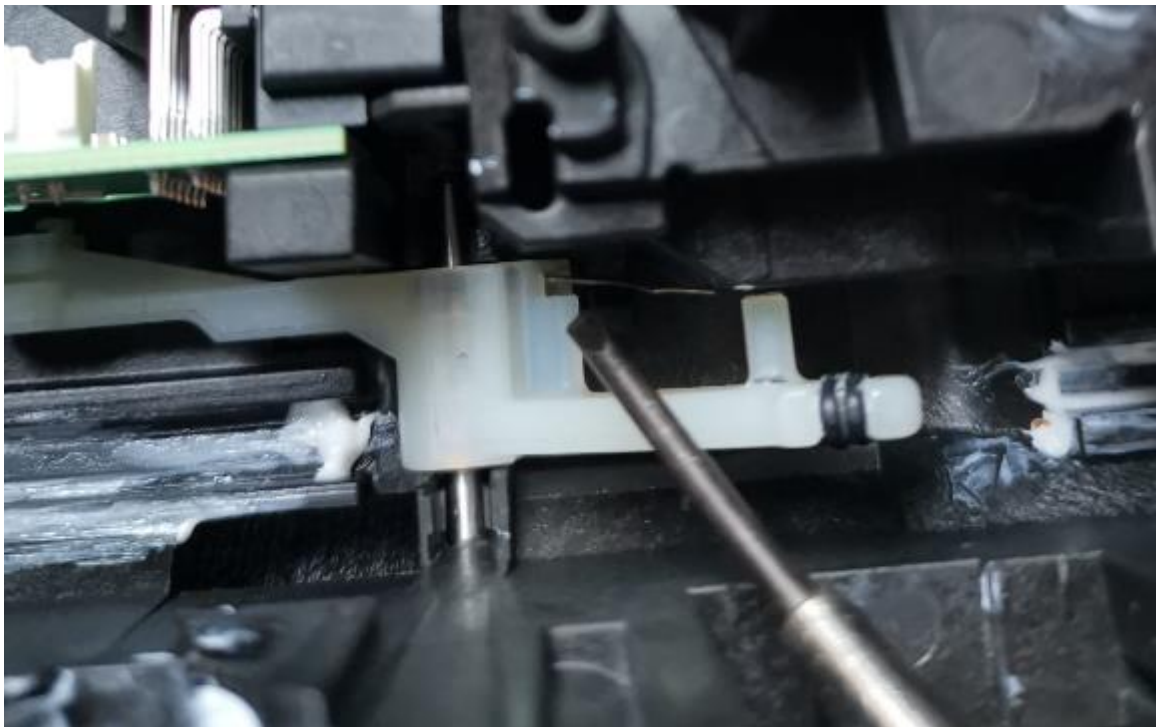


Here is the best example of a new torsion spring that I can find:



Here is the unit with the spring back in and resting:

The left side (under the circuit board) must always be pushed DOWN by the spring, and is only pushed up when the selector is slid into P. In that position, that white lever is pushed up, and the magnet is OVER the sensor on the circuit board.



12. Rebuild Car and Test:

This worked for me – Reverse all steps from here on and rebuild car. Test and hope it works.

I did a “clear all engine codes” with my OBD2 and nothing has come back.

Cheers – Jimbo.

jamesfarnell@gmail.com