

# FITTING INSTRUCTIONS FOR BMW FXX AND MINI STEERING WHEEL SPACER

- 1) the spacer kit comes pre-assembled, you don't need to unscrew the 5 allen bolts that hold the steel shaft and the aluminium hub together
- 2) Do the whole procedure **disconnecting the battery first**, to avoid airbag warning lights turn on after the assembling.
- 3) **Park the car with straight wheels before start.**
- 4) **Handle all the harnesses with care**, both when disconnecting and re-connecting the connectors. Be carefull not to pull, even accidentally the harnesses from the connector on the rotating contact. Otherwise you can hear an annoying "click" while rotating the steering wheel after the installation, which will require you to re-open it for fixing.

## EXTRACTING THE STEERING WHEEL

There are many tutorials on the internet / youtube, I resume here the steps required, but it's much easier after looking a video. You can search for "BMW 1 series F21 steering wheel removal" for example.

- 1) Pull out the airbag unit from the steering wheel. Depending on the car, the airbag is locked on the steering wheel thanks to 2 or 3 clip springs. Usually they're behind the spokes of the steering wheel, at 3/6/9 o'clock. To unlock the clamp springs, insert a flat screwdriver in the corresponding little holes at the sides of the steering wheel, behind the spokes. Grinding a bit the screwdriver in the middle of the flatness point, making a kind of "C" will help you finding the clamp springs and pushing them. Be patient in this step, you must feel the elastic resistance of the spring by hand, when you are sure that you are pushing a spring and not any other part of the interior of the steering wheel, keep it pressed: the corresponding side of the airbag will pop out.
- 2) Unplug all the connectors you see, starting from the one (or two, depend on the model year of the car) on the airbag. There may be a secure lock clip, which you must lift with your nail or a little flat screwdriver. Store the airbag in a safe place during installation, far away from people AND CHILDREN, for example in the back seat of your car. You can even leave the pending wires connected to the airbag, just unplug the wires themselves on the clockspring assembly side.
- 3) Unscrew the main bolt in the center of the steering wheel, and pull out the steering wheel BEFORE REMOVING THE SCREW! Leave the screw in for a turn or two. This is because, after years, the steering wheel (aluminium made) and the shaft, might have made a kind of "glued-effect" together and this may result in hard extraction steering wheel, which can hit your face and damage the harness.
- 4) When you're sure that the steering wheel slides on the shaft, you can remove the big central screw and the steering wheel itself, and make all wires and connectors go out from the slot just above the centre of the steering wheel itself.
- 5) At this point, you need to extend the wires because they're too short to be easily reconnected. There are 2 housings for 6 pin connectors on the rotating clockspring assembly. Insert the supplied wires in the pins, pay attention not to bend the pins.  
The supplied wires does not have the secure lock connector like the OEM wires, because those connectors are not available for aftermarket suppliers. The harness that we supply has the same pitch to match the pitch of the pins in the OEM connectors, and they are tight enough to stay in place without the "click-type" connector. Also, during driving, the wires are never under stretch effort, because the whole rotating contact is turned by the spacer core, so there is no risk of accidental disconnect of the wires.

## FITTING THE SPACER

- 6) The steering wheel spacer must be insert in the shaft, making the connectors housings (and the wires you've insert in) of the clockspring assembly go through the corresponding holes in the spacer
- 7) From now on, fit back the steering wheel in the same way you would do if the spacer would be not present. The spacer replicates the car's shaft. Insert the steering wheel in the male splined spacer's shaft; tight the longer supplied bolt at 60 Nm; store the OEM bolt somewhere you remember in case of future need and re-connect the connectors to the supplied wires which you have previously insert in the clockspring assembly.
- 8) Put the airbag back in place: pre align the airbag in its steering wheel housing, paying attention that no wire behind it is pressed by the airbag unit itself, then push it with both hands until you hear the "click" of the clamp springs and you can press the horn as usual, with the same feeling as before..
- 9) Re-connect the battery.

**END.**