

INSTRUCTIONS FOR MAZDA MX5 ND AND FIAT 124 STEERING WHEEL SPACER

Warnings:

- 1) Park the car with the straight wheels before installation, because the spline does not have any marker (made as extra wide teeth like other car brands) that allow the coupling in one way only.
- 2) Disconnect the battery before installation. This will avoid warning lights on after the procedure.
- 3) **The steering wheel buttons' harness inside the steering wheel must be extended, while the airbag's harness not, because it's already long enough from factory.** There are 2 harnesses starting from the steering angle sensor: one manages the steering wheel buttons, and has 14 pin connector, the other one is for airbag only, and has 2 wires.

Be carefull while handling the harness: never pull it, and pay attention about **no pulling it accidentally**, you can damage the steering angle sensor, or hear an annoying "click" while rotating the steering wheel at the end of the job, which requires to re-do the whole procedure only for pushing back the wires towards the steering angle sensor.

INSTALLATION PROCEDURE - There are many tutorials on the internet / youtube, about how to remove the airbag and steering wheel, I resume here the steps required, but it's much easier after looking a video.

- 1) Pull out the airbag unit from the steering wheel. Unlock the 3 clamp springs inserting a flat screwdriver in the 3 holes at the sides of the steering wheel (3, 6 and 9 o' clock position). The side holes are at the bottom of the 2 horizontal spokes. **Use a flat screwdriver**, and grind its flat head a little bit in the middle, making the flat edge becoming a "C", this will help catching the clips that hold the airbag unit in place. The spring clips are black and not easy to see from the holes.
- 2) When the airbag unit is in your hands, unplug the sockets in the back of it. Don't pull them out with force, they all have a secure plastic clips, unlock them first.
- 3) Lay the airbag unit far from working area and children.
- 4) Unlock the central nut, **without removing it yet:** the steering wheel can be hard to pull out in some case, and sudden unlock may result in hurt yourself by throwing the steering wheel on your teeth, also, pulling it out too fast may damage the pending harnesses. A puller may be necessary. It fits in the 2 M8 holes close to the central nut and with a central screw you will be able to unlock the steering wheel from the column.
- 5) When you're sure the steering wheel is easy to came out, remove the nut and stock both nut and steering wheel somewhere, for example, the passenger seat.
- 6) Now you can see the steering angle sensor, with the 2 sockets at the bottom (14 pin + airbag wire) and 2 pins at 3/9 o'clock. This is the moment to connect the plug-in harness. Insert the male connector in the clockspring assembly socket and leave it pending.
- 7) At this point, fit the aluminum side of the steering wheel spacer on the steering column. The 2 big pins of the steering angle sensor must make an horizontal line, and the aluminum spacer must be fitted respecting this alignment: the 2 big pins must go inside the 2 holes in the aluminum spacer. Tight the central OEM nut what was holding the steering wheel on the column.
The harnesses must go across the slot in the spacer.
CLEAN HANDS WITHOUT RINGS ON FINGERS! Otherwise you can damage the black surface.
- 8) Fit the male splined steel side of the spacer on the aluminium side, tightening the bolts, and use Loctite thread glue.
- 9) At this point, the female side of the harness must be insert in the corresponding main white connector that comes from the steering wheel. Let somebody hold the steering wheel for you while you restore the electrical connection, unless you have 3 or more hands.
- 10) Fit the steering wheel back in place. Fitting is the opposite of removal. The only difference is that you're going to insert the steering wheel on the extended shaft, instead of the steering column. The harnesses must go through the central square slot, in line with the bore in the steering wheel spacer.
Tight the central nut.
- 11) Put the airbag back on the steering wheel: reconnect the connector and pay attention because it has a specific orientation. Don't force it in if you're not sure it's well aligned.
Keep care when you re-push the airbag unit in place: look that it is well aligned and it's not going to press the wires, otherwise you can hear your horn permanently when switching ignition on.
There is only one orientation to push the airbag unit back in place, and you will hear a reassuring "clunk" if it is done properly. Again, have a look on youtube tutorials about steering wheel installation.
- 12) Reconnect the battery.

END.