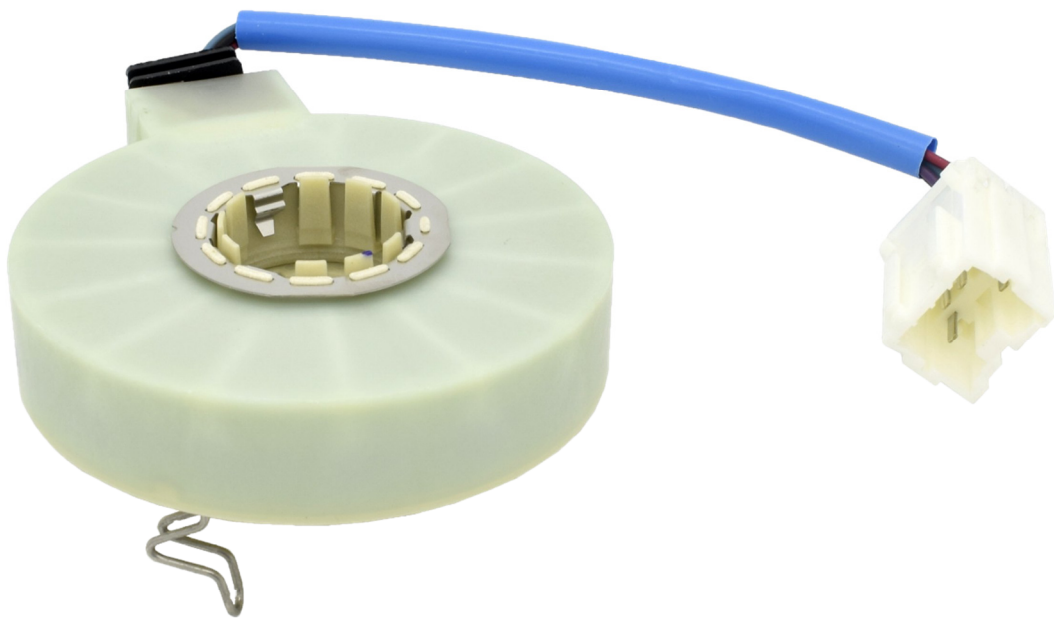




**automotive
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STEERING ANGLE SENSORS WITH CABLE REPLACEMENT PROCEDURE

INTRODUCTION

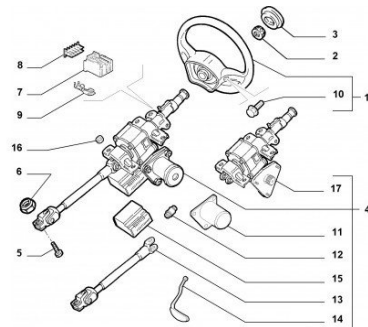
Shown below, you can find the procedure that you must follow to replace steering angle sensors with cable

INSTALLATION INSTRUCTIONS

You can replace all sensors, only if vehicle wheels are centered.

Steps:

- 1) Block the steering column shaft and then disassemble.



- 2) Disconnect sensor plug.



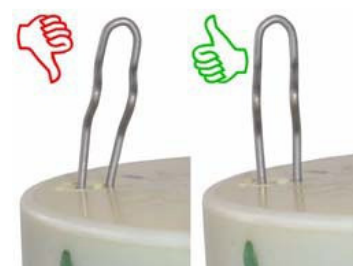
- 3) Remove elastic ring, gasket and hose.



- 4) Align the reference signs, rotating the shaft if needed. Remove the sensor from the bottom part with suitable tool.



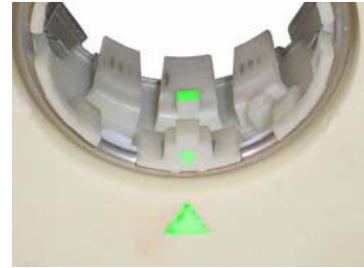
- 5) Pay attention at the new sensor: the spring clip has to be perfectly orthogonal to the plastic structure, in order to make both the sensor "disks" in-built.



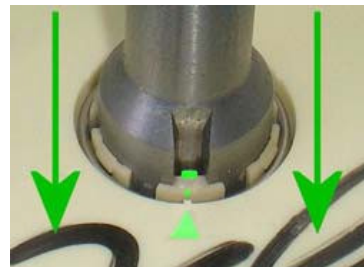
6) The shaft has two axial sleeves that get along with the two disks of the sensor.



7) Before starting fitting process, the three reference signs must be perfectly aligned.



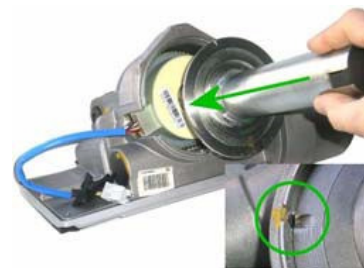
8) Fit the new sensor with uniform pressure to allow the coupling of the disks.



9) Pull out secure spring clip.



10) Reassemble hose, gasket and elastic ring.



11) Insert the plug in its housing.



12) Now the sensor is ok.

- a. Plug 6 wires: Use the diagnostic instrument to monitor the correct position of the shaft and the torque value (0.1 ÷ 0.6);
- b. Plug 7 wires: Use the diagnostic instrument to monitor the correct position of the shaft (-144) and the torque value (zero).



ANY ISSUES

If you have one or more of these problems:

- Steering wheel unbalanced on the left/right
- Dashboard lamp switched-on
- Steering wheel activate by itself

There are some problems about incorrect assembly.

To solve these problems, you should implement again and to follow all procedure.

NOTES

For Fiat Punto 188 first series (450003), the shaft has diameter 1 mm more than the equivalent second series. In this case it is necessary to reduce the material with appropriate tools (lathe-milling machine), as indicated in the technical sheet supplied.