

Audi A3 gear lever position sensor failure

The Eure!Tech Blog covers problems that mechanics are facing every day. A recent post from the Eure!TechBlog about a malfunction in the gear lever position sensor on an Audi A3. The blog, which is updated regularly, can be read at www.euretechblog.ie.

Audi A3 Fault Malfunctions in the gear lever position sensor

Several instances of faults in the AUDI 7-speed Direct-Shift-Gearbox (DSG) gearboxes affecting the A3 (8P1) model have been seen by the Eure!Car technical helpline.

Symptom

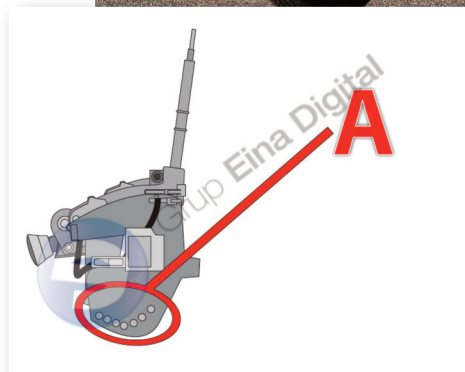
Some mechanics are having problems with the generic P-Codes (ISO), the description of which can be confusing without knowledge of the operation of the DSG system in these vehicles. Several symptoms concerning engine performance of the vehicle may also occur along with these fault codes.

Below are detailed all the symptoms that may appear:

- P1604 - Defective control unit
- P1730 - Gear lever position sensor No.2 Electrical fault.
- P1731 - Gear lever position sensor No 3 Electrical fault.
- P1735 - Clutch No.1 position sensor Electrical fault.

The aforementioned fault codes are recorded in the gearbox control unit. The following conditions are seen in the vehicle:

- Malfunction indicator lamp (MIL) on
- Gear indicator light flashing
- Gearbox remains in emergency mode
- The vehicle remains in degraded mode



NOTE: The description of fault codes P1730 and P1731 may confuse a mechanic into believing that the code is referring to the gear lever and the corresponding sensor inside the group of 16 Hall sensors (see image A), which is designed to detect the position of the gear lever itself.

If the correct operation of the DSG gearbox is known, it can be understood that codes P1730 and P1731 refer to the travel sensors of the forks inside the gearbox to carry out the gear change.

Possible Causes

The following causes may be responsible for the aforementioned symptoms to occur:

There is a fault in the position or travel sensor of the affected gear or described in the fault code itself. The cause of the defect is due to the presence of metal

particles caused by wear of the internal gearbox components. This happens because the lubricating oil of this system also circulates inside the mechatronic valve circuit. If fault code P1604 occurs, the mechatronic unit has been damaged beyond repair.

NOTE: In DSG gearboxes, it is very important to carry out maintenance at the manufacturer's recommended times of approximately 60,000 km. Regular servicing should prevent the gearbox lubricating oil from damaging a position sensor, or even the mechatronics themselves.

Procedure

The solution that our workshop care and support department has successfully carried out is as follows:

- Read the fault codes in the gearbox control unit using the diagnostic tool
- Confirm that the cited fault code is recorded in the symptom field of this technical note
- Replace the mechatronic unit with a new one
- Clean the travel sensors for each gear, and its opposing magnet
- Replace the gearbox lubrication oil .