Steering column switches

suitable for: DAF, Ford, Iveco, MAN, Mercedes-Benz, Volvo etc.

Accurate diagnosis for a successful repair

Steering column switches control a wide range of vehicle functions. When problems occur, the switch itself is not always the cause of failure. A targeted diagnosis provides clarity and supports efficient repairing.

In the latest PS Tips video, Parts Specialist Rolf demonstrates how to systematically identify errors in steering column switch systems and avoid unnecessary replacements. Various versions of the steering column switch are available on the Diesel Technic Partner Portal. The DT Spare Parts range comprises more than 130 steering column switches for numerous applications, including DAF, Ford, Iveco, MAN, Mercedes-Benz and Volvo.

Steering column switches control, among other things, the lights, windscreen wipers, gearbox and cruise control,

and therefore rank as one of the key control elements in vehicles. While older vehicles often transmitted control commands directly to the respective components, today's systems first send the signals to a control unit. "This makes structured troubleshooting all the more important, as incorrect diagnoses can quickly lead to unnecessary repair costs," says Parts Specialist Rolf.

A multimeter and an up-to-date circuit diagram are essential for a reliable diagnosis. You should always start by checking the battery voltage. Then use the circuit diagram to identify and check the relevant fuse. In newer vehicles, where the switches communicate via control units, it is also advisable to read out the error memory in order to include any existing error codes in the diagnosis.

Rolf uses the example of a broken windscreen wiper to demonstrate how important a systematic approach is. Once the power supply and the fuses have been checked, troubleshooting should ideally begin with the most easily accessible component – in this case, the wiper motor. "If there is no voltage present there, a visual inspection of the plug connections should also be performed. Damaged or bent contacts can be the cause of malfunctions," emphasises Rolf. For a reliable assessment, it is recommended to check with a suitable test plug.

"If, based on the circuit diagram and a multimeter, it is found that the power supply to the windscreen wiper motor is interrupted, this suggests a control issue," says the Parts Specialist. Before carrying out a complex inspection of the control unit, the steering column switch should be included in the diagnosis.

As part of the Diesel Technic Quality System (DTQS), various steering column switches are comprehensively tested. All functions can be tested under realistic conditions on specialised test benches. During these tests, for example, signal outputs are visualised or loads are switched. Some steering column switches transmit digital data frames to the control unit. As part of the product development process, these signals are analysed and compared with the specifications of the original part. Other versions operate using defined resistance values, which are transmitted to the control unit. These can be measured using a multimeter and compared with the reference values.

There are also a few points to consider when installing the switch. "If the airbag has to be removed to replace the steering column switch, it is essential to comply with the applicable safety regulations," Rolf points out. If burnt contacts are found on plug connections, the opposing part should also be repaired to prevent further damage or repeated failures. If there are no threads at the fastening points for the new switch, it can be assumed that self-tapping screws are to be used. Rolf emphasises: "Using a thread cutter, or fastening screws that are too long, can lead to damage to the internal components and therefore to functional limitations."

If you have any technical questions about Diesel Technic products and services, our Parts Specialists are happy to help via their HelpDesk and offer the right support: helpdesk.parts-specialists.com.

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More info: www.dtqs.de