



Vehicle Speed Sensor

General

Vehicle speed sensors record the driving speed. It is assembled on the transmission (e.g. VW/Audi) or on the rear axle (e.g. BMW). This information is needed for the speed indication, cruise control and torque converter slip control.



Function

The Vehicle speed sensor records a changing magnetic field produced by a rotating multipole disc.

The magnetic field opens and closes a reed contact, built in the sensor and supplied with operating voltage. The output signal is passed to the ECU as a square wave..



Effects of failure

A faulty vehicle speed sensor could cause the following:

- speedometer not indicating
- cruise control/torque converter slip control not operating
- engine warning light illuminating

Causes of failure:

- mechanical damage
- bad electrical connections
- supply voltage wrong
- faulty reed contact



Diagnostics

For fault recognition consider the following system tests:

1. check the distance sensor for damage
2. electrical leads checked for correct size and contact
3. read out trouble codes
4. check the operation voltage(wiring diagram needed for pin definition)
5. wiring harness checked for continuity between the connectors and sensor plug(wiring diagram needed for pin definition) measurement with a ohmmeter, measured value= less then 1 ohm
6. wiring harness checked for short circuit to earth between sensor plug and vehicle ground(ECU plug removed circuit) measurement with a ohmmeter, measured value> 30 Mohm