



## Throttle Valve Switch

### General

A throttle valve switch records the position of the throttle valve. It is fitted to the throttle valve spindle and send the information about the position to the ECU to assist in the calculating the fuel injection.

### Function

Inside the throttle valve switch are two contacts which are operated by a lever mechanism. The two switches send the information about full load and idle speed of the engine to the ECU. The ECU uses these to calculate the fuel injection for each throttle position.



### Effects of failure

A faulty throttle valve switch can cause the following:

- Engine stalls at idle
- Engine is jerky at full throttle

Cause of failure:

- Mechanical damage (e. g. vibrations)
- Bad electrical connections in the plug
- Bad electrical connections on the contacts inside the switches



## Diagnostics

For fault recognition considering the following system tests:

1. Check throttle valve switch for correct fitting.
2. Check lever mechanism by operating throttle valve.
3. Check electrical lead for correct fitting and contact.
4. Check shift contacts with an ohmmeter:
  - idle speed contact closed, throttle at idle speed position: measurement between pin 1 and 3, measured value:  $> 30\text{Mohm}$
  - idle speed contact opened, between idle and full throttle position: measurement between pin 1 and pin 3 (attention- open the throttle valve during the measurement till the idle contact is open) measured value = 0 ohm
  - full load contact opened, between idle and full throttle position measurement between pin 1 and 2, measured value:  $>30\text{ Mohm}$
  - full load contact closed, full throttle position: measurement between pin 1 and 2, measured value: =0 ohm

## Pin definition

