

Stepper motors for idle control*

Complaints for malfunctioning

POSSIBLE CUSTOMER COMPLAINTS

- New replacement stepper motor found to be malfunctioning
- Unstable or abnormally high idling speed after installation of a new stepper motor

--> **This is not an error!**



Modern engine-control systems use 'adaptive memory modules' (i.e. some of the mapping data required for operation need to be 'learnt').

This is required, for example, if a component has been replaced.

A test run should therefore be carried out once the stepper motor has been fitted, and the idle-speed regulating system should not be checked again until this operation has been completed.

- The mapping data are not captured until the system is running normally (and are then saved to memory). Note that this procedure may require several minutes.

If there is still a malfunction, check the stepper motor to ensure that it is working correctly.

FUNCTION

The task of the stepper motor is to keep engine idling speed virtually constant under all operating conditions. Depending on the load condition and coolant temperature, it regulates the airflow for warm-up and maintaining the idle speed (idle fuel governor).

The stepper motor is seated in an air duct as a bypass to the throttle valve directly at the throttle housing.

Please note: Different names are used for stepper motors in practice, e.g. control, idle fuel governor, idle control valve, valve for idle stabilisation, stepper motor etc.

* This information was taken from PIERBURG Service Information (relevant article: si 0060 GB).