



Golf IV, model years 09.2000–2004 Engine 1.9 TDI (engine code AXR)

Engine vibrates and/or shakes when idling

If there are complaints about this fault, then one or several pump-nozzle elements (injectors) could be defective. Vehicles with engine codes **AXR 001000** to **AXR 025181** are affected. No error code is stored in the engine control unit. Due to increased wear of the solenoid armature in the pump element, inadmissible tolerances occur and the amount of fuel injected is too great (over-rich mixture). The idling smoothness regulation tries to compensate for the over-rich mixture by reducing the injection quantity. The greatly different injection quantities then lead to the vibrations when idling. To check the injection quantities of the individual pump-nozzle elements, proceed as follows:

Einzelinjektor (mg/10)	Wert
Zyl. 1 Laufhubreg. Einj/10	1.4
Zyl. 2 Laufhubreg. Einj/10	-2.3
Zyl. 3 Laufhubreg. Einj/10	1.7
Zyl. 4 Laufhubreg. Einj/10	0.3

- Connect a diagnostic tester to the vehicle. The engine must be at operating temperature.
- Select menu item "Parameters/Measured values".
- Select vehicle type.
- Select menu item "Idling" and confirm the idling smoothness regulation for all cylinders.
- The screen then shows the measured values (see illustration). If the values deviate from the zero value (far into the plus or minus range), then the pump-nozzle element with the positive value must be checked and, if necessary, replaced.