

Hints and Tips: Audi

ENGINE DOESN'T START

FAULT: Engine doesn't start or stalls briefly after the start - ECU disabled

CAUSE: The ECU is intermittently disabled Because of a fault in the immobiliser (transponder). Due to corrosion on the connectors of the immobiliser control unit there are often loose connections.

SOLUTION: If the immobiliser control unit has no fault stored, the cause is a loose contact or an excessive transition resistance on connectors or earth connection.

- Check the earth cable and earth contact for the immobiliser control unit.
- The cables of the control unit must be routed free of tension.
- With height adjustable steering wheels make sure the cable to the reading coil has enough clearance. Observe the maximum adjustment range of the steering wheel.
- Attach the loose cable from the reading coil with a cable binder at a suitable point, as near to the control unit as possible.

In case of persistent complaints replace both control unit and reading coil with tin-plated contacts or with gold-plated contacts. A mixed installation of tin-plated and gold-plated contacts is causes corrosion.

· The old part number of the control unit is indicated using the V.A.G 1551

· For identification the new control unit has a brown mark or the plug end is brown.

GLOW WARNING FLASHES PERMANENTLY

FAULT: Diesel engine, Glow warning flashes permanently, Starting problems, fault entry 17978 engine starts and stalls again straight away. Restart is possible.

CAUSE: It is intermittently not possible to read the key signal because of a software or hardware fault in the combination instrument of the supplier Magneti Marelli. The V.A.G tester indicates the fault "Key, signal too small". On vehicles with TDI engine the glow warning flashes permanently. This is caused by a software fault in the ECU.

SOLUTION: Replace the parts, Modified combination instruments have the same part number, but are a new data version. Display in the V.A.G tester - Part No. 3B0 919 V06. Check and repair according to the Workshop Manual. If no fault is found, delete the fault memory and avoid repairs.

ENGINE DIFFICULT TO START WHEN WARM

AFFECTED MODELS: 1.9L TDI 181 KW only with manual gearbox engine code AFN.

FAULT: Engine difficult to start when warm, only after approx. 20 seconds of starter operation.

CAUSE: The starter motor is not revving fast enough.

SOLUTION: Check the battery. If no fault is found, carry out a test by programming the ECU to automatic gearbox. If the engine then starts normally, replace the starter motor. After replacing the ECU recode to manual gearbox.

ENGINE DOESN'T START OCCASIONALLY

FAULT: Engine doesn't start occasionally, frequently after a short drive, the ECU is locked

CAUSE: The electrical system collapses in jerks when engaging the starter motor. As a result the ECU is locked. Only model year 96 with 44 Ah battery affected.

SOLUTION: Check the earth cable from battery to engine and particularly the earth pin on the body below the battery is properly installed.

FLUCTUATING, EXCESSIVE IDLE SPEED

AFFECTED MODELS: All vehicles with Bosch Motronic fuel injection system.

FAULT: Fluctuating, excessive idle speed - engine starts after charging the battery.

CAUSE: If the battery is disconnected or discharged the Motronic control units lose their programmed and stored basic adjustments.

SOLUTION:

When starting the engine after the battery was discharged or disconnected, switch on the ignition for approx. 10 seconds and then switch it off again. This makes sure that the old adaptation

values are deleted and stored again in the control unit. After this the engine starts without problems and the above symptoms do not occur again.

INCREASED IDLE SPEED

AFFECTED MODELS: Model year 96 Magneti Marelli 1AV, 1.6L, AEE engine.

FAULT: Increased idle speed (max. 2,500 rpm) after starting the engine with a coolant temperature between 18deg.C and 29.5deg.C

CAUSE: Software problems lead to increased idle speed (max. 2,500 rpm) after starting the engine with a coolant temperature between 18deg.C and 29.5deg.C. After approx. 40 seconds or after the first acceleration the idle speed returns to normal.

SOLUTION: Install the modified control unit:

Polo - Part No. 032 906 030 E

Polo Automatic - Part No. 032 906 030 H

Golf - Part No. 032 906 030 K

The control unit must be adapted to the electronic immobiliser. Also carry out a basic setting of the ECU (adapting it to the throttle valve control unit).

NO ACCELERATOR RESPONSE

AFFECTED MODELS: Engine code: AHU, AFN 1.9 L TDI 66/81 KW

FAULT: No accelerator response, engine only runs at idle speed. Fault entry: '777'-'sender for accelerator pedal position implausible signal".

CAUSE: Water gets into the box for the ECU, contaminating ECU and connectors. The cause for the water entering the ECU box is a missing or incorrectly fitted seal.

SOLUTION: Check, whether the seal ring is present or incorrectly fitted. If necessary fit or adjust the seal. Check the engine ECU and the plug for water or corrosion. Clean the parts or replace them if corroded.

REV COUNTER FAILS OCCASIONALLY

AFFECTED MODEL: 2E engine

FAULT: Rev counter fails occasionally, oil warning comes on, automatic gearbox switches to the emergency programme.

CAUSE: Due to a leakage current in the Hall sender the ECU receives a weaker engine speed signal. This can occasionally disrupt the signal processing for rev counter, automatic gearbox control unit and oil warning control unit. The fault is not stored in the ECU. Only in the automatic gearbox control unit the fault "00529 engine speed information missing, sporadic fault".

SOLUTION: Replace the ignition distributor. Passat vehicles are not affected by this fault.

EXCESSIVE FUEL CONSUMPTION

AFFECTED MODELS: VR6 with Motronic 3.8.1 with AAA/ABV engine (Golf and Passat).

FAULT: Excessive fuel consumption. The ECU stores fault code 525, lambda sensor short circuit to earth, automatic gearbox shifts too late.

CAUSE: Unlike the Motronic 2.9 from MY 96 the Motronic 3.8.1 operates with potential free lambda sensors so no earth connection to the exhaust system.

SOLUTION: Check the part number of the lambda sensor, if necessary replace the lambda sensor. From MY 96 a modification for the operation of leaded fuel is no longer necessary. Part no. 021 906 265 T(Golf and Passat) and part no. 021 906 265 AC for engine code AAA and part no. 030 906 265 BD for engine code ABV (Golf and Passat).

VEHICLE JERKS AND BACKFIRES

AFFECTED MODELS: Engine code AHL, 1.6 L Simos

FAULT: From cold to operating temperature the vehicle jerks and backfires into the induction manifold when driving off.

CAUSE: Acceleration enrichment adjustment in the ECU too lean.

SOLUTION: Fit the control unit with Part No. 3B0 907 557 D - data version D02 available.

ENGINE DOESN'T START

AFFECTED MODELS: Engine code AHL 1.6 I Simos

FAULT: Engine doesn't start, stalls when accelerating - fault code 00516, 00625, 00282, 00537 or 00635 in the fault memory.

CAUSE: Analog-digital converter in the ECU stops, causing all sensor values to freeze (e.g. throttle valve potentiometer voltage remains the same at closed and open throttle valve).

SOLUTION:

Note: Modified control units have only been designed to cover the damage caused. The latest data version includes, of course, all the previous service solutions. For a failure of the analog-digital converter the control unit - Part No. 3B0 907 557 D - with data version D01 or with the latest data version D02 can be fitted.

ENGINE STARTS OR STALLS

AFFECTED MODELS: Automatic

FAULT: Engine doesn't start or stalls, possibly fault code 545 and 638 in the fault memory of the gearbox control unit.

CAUSE: Power supply relay has loose contact.

SOLUTION:

Check the power supply for the carburation control unit, if necessary replace the power supply relay.

WARNING LAMPS ARE ON

FAULT: Warning lamps are on - ABS doesn't work,

CAUSE: The codes of the control unit and cable harness are checked during start up. If the ignition switch moves during the code check, the fault- "Code wrong" is set and the ABS control unit switched off.

SOLUTION: Check the code of control unit and cable harness according to the workshop manual. If no fault is found, replace the ignition switch.

ABS LAMP COMES ON

MODELS AFFECTED : Petrol engines, all - except VR6

FAULT: ABS lamp comes on, fault code 01276.

CAUSE: When the ABS cable loom is damp and the vehicle is operating at high engine speed leakage current of the ignition coil gets into the suppressor of the pump sensor cable.

SOLUTION: Change the routing of the pump sensor cable. Route the ABS pump sensor cable and engine speed sensor cable away from the ignition transformer to the arch by unwrapping the engine speed sensor cable and pump sensor cable to the arch. Wrapping up the pump sensor cable without engine speed sensor. Rerouting the engine speed sensor cable on the bulkhead. Routing the pump sensor cable and fastening it with existing cable binder to suspension strut housing.

ENGINE CUTS OUT

AFFECTED MODELS: AER, MY 971.0 I/37 kW, aluminium engine, with power steering(Polo).

FAULT: Engine cuts out or the idle drops sharply when using the power steering (fully turning the steering wheel).

CAUSE: Power steering hose not fitted with the pressure switch F88.

SOLUTION: Check, whether the power steering hose is fitted with the pressure switch F88. If it isn't, fit the power steering hose with the pressure switch F88 and insert the 2 pin connector below the battery mounting. The following hoses must be used: LHD: Without air conditioning: Part No. 6N1 422 893 D With air conditioning: Part No. 6N1 422 893 ERHD: Without air conditioning: Part No. 6N2 422 893 D With air conditioning: Part No. 6N2 422 893 E

TRACTION CONTROL WARNING LAMP

FAULT: Traction control warning light is on when vehicle is stationary from approx. 3,500 rpm.

CAUSE: On vehicles with TDI engine the traction control warning lamp flashes when stationary from approx. 3,500 rpm. Vibrations in the drive train make the gap between sensor and impulse wheel change. This induces a voltage, which switches on the traction control warning lamp.

SOLUTION: The ABS/traction control system is all right. In case of persistent complaints replace the control unit. The part number is unchanged.

ABS FAILS OCCASIONALLY

FAULT: ABS fails occasionally - fault memory is either empty or refers to supply voltage.

CAUSE: The earth cable from the battery to the ABS unit has a poor connection to the body. The nut below the battery console is not tightened or crooked. There is too much resistance in the connection between earth cable and body.

SOLUTION: Clean and tighten connection between earth & body. Delete fault memory and read again after a test drive.

STARTER MOTOR DESTROYED

AFFECTED MODELS: Diesel

FAULT: Starter motor destroyed by continued cranking

CAUSE: Stop ring on the spindle broken.

SOLUTION: Replace the starter motor.

STARTER MOTOR MAKES NOISES

AFFECTED MODELS: Polo, Golf, Passat

FAULT: Starter motor makes noises, continues to run.

CAUSE: Premature wear due to poor lubrication in the area of the bearing bush on the drive side of the starter motor.

SOLUTION: Replace starter motor.

ENGINE DIFFICULT TO START

AFFECTED MODELS : Diesel transporter.

FAULT: Engine difficult to start or doesn't start when cold

CAUSE : Glow system inoperative - blown fuse. The insulation of the glow plug connector is damaged/chafed through by the screw at the coolant neck/pipe and/or by the housing of the vacuum pump - earth connection.

SOLUTION: Repair/ replace parts. Change from outer to inner hex head screw and glow plug connectors.

ENGINE DOESN'T START WHEN COLD

AFFECTED MODELS : 16V (Golf, Jetta)

FAULT: Engine doesn't start when cold, no spark at temperatures below freezing.

CAUSE: Due to a too high voltage drop the control unit fails during the starting procedure.

SOLUTION: Move the earth point from the subframe to the bell housing. Use new earth braid. Part No. 533 971 235.