

VOLKSWAGEN · POWERTRAIN

P1642

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1642 · Volkswagen

Check DTC Memory Of Airbag ECU

P1642 on a Volkswagen means the engine control module (ECM) has been asked to read the airbag control module's fault memory and has found a problem that prevents a clean read, or the airbag module itself has stored faults that the ECM is flagging. The ECM is not reporting an airbag fault directly; it is telling you that the airbag electronic control unit (ECU) has diagnostic trouble codes (DTCs) stored or is not communicating properly over the data bus.

SYSTEM

Powertrain

CODE TYPE

**Volkswagen
specific**

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

**Computer and
output circuits**

Symptoms you may notice

- Airbag warning light illuminated on the instrument cluster, often accompanied by a chime
- Passenger airbag off indicator may stay lit or flash unexpectedly
- Often no symptoms besides the warning light, with the car driving normally
- In some cases, the airbag system may be disabled, and the cluster may show a message like 'Airbag fault'
- Intermittent warning light that comes and goes with temperature changes or rough roads
- Other unrelated warning lights may appear if the data bus is disturbed

Common causes, most likely first

- 1 Faulty clock spring (spiral cable) in the steering wheel, causing intermittent airbag circuit resistance
- 2 Poor connection or corrosion at the airbag control module connector or under-seat airbag connectors
- 3 Failed airbag control module (ECU) itself, often due to water ingress or internal fault
- 4 Wiring damage in the airbag harness, such as chafed wires behind the dash or in the steering column
- 5 Low voltage or a weak battery causing the airbag module to set communication faults
- 6 Aftermarket accessories or improper radio installation disturbing the CAN bus (controller area network) wiring
- 7 Seat occupancy sensor or passenger airbag deactivation switch fault storing a code in the airbag module



How to diagnose and fix it

- 1 Connect a Volkswagen-compatible scan tool and read the airbag control module fault memory directly to see the specific stored codes
- 2 Check battery voltage and charging system; low voltage can cause spurious communication codes
- 3 Inspect the airbag module connector and under-seat connectors for corrosion, loose pins, or water damage
- 4 Perform a visual inspection of the clock spring and steering column wiring for damage or wear
- 5 Clear the airbag module codes and re-check; if the code returns, follow the specific airbag DTC diagnostic tree
- 6 Check CAN bus communication between the ECM and airbag module using a multimeter or oscilloscope if communication faults are present
- 7 Replace the faulty component (clock spring, airbag module, or wiring) only after confirming the root cause with proper testing

What the airbag ECU is really telling you

- P1642 is a gateway code: the ECM is simply reporting that the airbag ECU has its own stored faults, so always scan the airbag module directly rather than replacing the ECM.
- A common misdiagnosis is replacing the airbag control module when the real fault is a worn clock spring or a corroded under-seat connector, which are far cheaper to fix.
- Low battery voltage or a recent jump start can set this code without any real airbag fault; clearing it after charging the battery often resolves the issue.
- Aftermarket stereos or alarm systems tapped into the CAN bus can disrupt communication and trigger P1642, so check for non-factory wiring before condemning modules.
- On some Volkswagen models, the airbag module is located under the center console or passenger seat, where spilled drinks or clogged sunroof drains can cause water damage and set this code.

Can I keep driving with P1642?

The car is generally safe to drive because the airbag system may be disabled, but the restraint system may not deploy in a crash. Avoid rough roads and steering wheel movement that could worsen an intermittent fault, and have the airbag system diagnosed promptly.

Tools that help

- Volkswagen-compatible scan tool (VCDS, OBDeleven, or professional-grade scanner)
- Digital multimeter for voltage and resistance checks
- Oscilloscope for CAN bus signal analysis (optional but helpful)
- Trim removal tools for accessing airbag module and connectors
- Torque wrench for safe reassembly of airbag components



Reading P1642

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Volkswagen): its meaning depends on the make.
- 6** Computer and output circuits.
- 42** The exact fault within that area.

Often seen with

P1643 Check DTC Memory Of Central ECU · **P1644** Check DTC Memory Of Clutch ECU · **P1645** Data Bus Powertrain Defect · **P1645** Body ECU Malfunction · **P1645** Fuel Pump Resistor Switch Circuit · **P1643** CAN Link Engine Control Module Transmission Control Module C · **P1643** Engine Speed Output Circuit · **P1644** TP Output Circuit · **P1645** Boost Control Solenoid Circuit / EVAP Solenoid Output · **P1643** Fuel Pump Monitor Circuit Low Input · **P1644** Fuel Pump Speed Control Circuit Malfunction · **U0151** Lost Communication With Restraints Control Module

See it working

Watch the animated explainer [How Airbags Work: A 50 km/h Crash in Slow Motion](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1642/>

