



U042D

Invalid Data Received From Active Vibration Control Module

U042D means the module that coordinates the vehicle's active vibration control system sent data that other modules on the network judged invalid or implausible. The fault is set by a module that receives the corrupted or missing message, not necessarily by the vibration control module itself, so the root cause can be network communication, power supply, or the module's internal processing.

SYSTEM Network	CODE TYPE Generic (all makes)	SEVERITY Medium	FIX DIFFICULTY Professional	AREA Invalid data received from a module
--------------------------	---	---------------------------	---------------------------------------	--

Symptoms you may notice

- Illumination of the malfunction indicator lamp (MIL) or a chassis/system warning light, often with no other noticeable symptoms.
- A vibration or harshness that the active vibration control system is supposed to cancel becomes more pronounced at certain engine speeds or road speeds.
- The vehicle may default to a fixed damping or vibration strategy, producing a firmer or less refined ride than normal.
- Intermittent operation of other driver-assist or chassis features that share network data with the vibration control module.
- No drivability change at all in many cases, because the fault is a communication/data integrity issue rather than a mechanical failure.



Common causes, most likely first

- 1 A weak or failing 12-volt battery or poor charging system voltage causing the active vibration control module to send corrupted data frames.
- 2 Corroded, loose, or damaged connectors and terminals at the active vibration control module or at a network gateway module.
- 3 CAN (Controller Area Network) bus wiring faults such as chafed, open, or shorted data lines between the vibration control module and other network nodes.
- 4 A software or calibration mismatch in the active vibration control module after a battery replacement, module replacement, or manufacturer update.
- 5 Internal failure of the active vibration control module, including a faulty processor or transceiver that produces invalid data.
- 6 A failing network gateway or body control module that corrupts or misroutes messages before they reach the module that sets U042D.
- 7 Aftermarket accessories wired into the network or power circuits that introduce electrical noise and disrupt data integrity.

How to diagnose and fix it

- 1 Perform a full battery and charging system test, including a load test and voltage-drop checks on the main grounds, before condemning any module.
- 2 Scan all modules for stored and pending codes, record freeze-frame data for U042D, and check whether the vibration control module is communicating at all.
- 3 Inspect and clean the connectors and terminals at the active vibration control module, looking for corrosion, pushed pins, or water intrusion.
- 4 Check the CAN bus integrity with a digital multimeter and oscilloscope, measuring resistance between the data lines and verifying signal waveform quality.
- 5 Verify the active vibration control module's software calibration and reflash or relearn it if a manufacturer update or configuration mismatch is found.
- 6 Substitute a known-good active vibration control module only after wiring and power checks pass, then perform any required initialization or calibration.
- 7 Clear codes, road-test the vehicle through the conditions that originally set U042D, and confirm the fault does not return before releasing the vehicle.



Why the vibration module is not always the culprit

- U042D is a data-integrity code, so the module that reports it may be perfectly healthy while a different node on the network is corrupting the message.
- Low battery voltage during cranking is one of the most common triggers, and a battery that starts the engine fine can still drop far enough to scramble module communications.
- A vibration control module that has lost its calibration after a battery disconnect can broadcast invalid data until a relearn or initialization procedure is completed.
- Aftermarket alarms, dash cameras, or phone chargers plugged into the wrong circuit can introduce electrical noise that mimics a failing vibration control module.
- Technicians who replace the vibration control module without checking network wiring often find the same code returns because the real fault is a chafed CAN wire.

Can I keep driving with U042D?

The vehicle is generally safe to drive because U042D affects a comfort and vibration system rather than steering, braking, or engine control. Avoid towing heavy loads or driving at sustained high speeds until the fault is diagnosed, since a vibration control system in default mode may reduce stability and tire contact under those conditions.

Tools that help

- OBD-II scan tool with manufacturer-level module communication and freeze-frame capability
- Digital multimeter with min/max recording for voltage and resistance checks
- Oscilloscope for CAN bus waveform analysis
- Battery load tester and charging system analyzer
- Terminal pick and contact cleaner for connector inspection
- Manufacturer service information for network topology and calibration procedures

Reading U042D

U Network: communication between the vehicle's control modules.

0 Generic (SAE) code: it means the same thing on every OBD-II vehicle.

4 Invalid data received from a module.

2D The exact fault within that area.



Often seen with

U0100 Lost Communication With ECM/PCM A · **U0121** Lost Communication With Anti-Lock Brake System (ABS) Control · **U0140** Lost Communication With Instrument Panel Cluster · **U042C** Invalid Data Received From Chassis Control Module B · **U042E** Invalid Data Received From Generator A Control Module

See it working

Watch the animated explainer [Readiness Monitors and the OBD-II Drive Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u042d/>

