

GENERIC · NETWORK

U041A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U041A

Invalid Data Received From Battery Isolation/Voltage Stabilization Control Module

U041A indicates that a control module on the vehicle's controller area network (CAN) bus has received invalid or missing data from the battery isolation or voltage stabilization control module. The computer detected that the messages from this module are either absent, corrupted, or outside the expected range, which can affect power management and charging system coordination.

SYSTEM Network	CODE TYPE Generic (all makes)	SEVERITY Medium	FIX DIFFICULTY Intermediate	AREA Invalid data received from a module
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Symptoms you may notice

- Illumination of the malfunction indicator lamp (MIL) or a dedicated battery/charging system warning light.
- Electrical accessories may behave erratically, such as flickering lights or intermittent radio operation.
- The vehicle may enter a reduced power mode or exhibit a no-start condition if the battery isolation module is critical to power distribution.
- Voltage readings on the dashboard gauge may fluctuate or show abnormal values.
- Often no symptoms besides the warning light, especially if the fault is intermittent and the module continues to function.
- Possible stored trouble codes in other modules related to lost communication or low voltage.

Common causes, most likely first

- 1 Faulty battery isolation or voltage stabilization control module, often due to internal failure or water intrusion.
- 2 Damaged or corroded wiring and connectors in the CAN bus circuit between the module and other network components.
- 3 Low battery voltage or a failing battery that causes the module to drop offline intermittently.
- 4 Poor ground connection for the battery isolation module or the body control module it communicates with.
- 5 Software or firmware issues in the module requiring reprogramming or replacement.
- 6 Aftermarket electrical accessories improperly installed, causing voltage spikes or bus interference.
- 7 CAN bus termination resistor failure or other network integrity issues affecting communication.



How to diagnose and fix it

- 1 Perform a battery and charging system test to rule out low voltage as the root cause.
- 2 Use a scan tool to retrieve all stored codes and check for communication codes in other modules.
- 3 Inspect the battery isolation module connectors and wiring for corrosion, damage, or loose pins.
- 4 Check the module's power and ground circuits with a multimeter and perform voltage drop tests.
- 5 Verify CAN bus integrity by measuring resistance between CAN high and CAN low and checking for shorts to ground or power.
- 6 If wiring and power are good, reprogram or replace the battery isolation module as per manufacturer procedures.
- 7 Clear codes and perform a road test to confirm the repair and ensure no codes return.

Overlooked Causes of U041A Battery Module Faults

- A weak or failing battery often causes this code because the battery isolation module may reset or drop offline during cranking, setting a communication fault without any module defect.
Corroded ground points, especially those shared with the body control module, can cause intermittent invalid data that mimics a failed module.
- Aftermarket alarms or remote starters tapped into the CAN bus can introduce noise or voltage spikes that corrupt messages from the battery isolation module.
- The code does not always mean the module is bad; a loose or damaged connector at the module can produce the same invalid data symptom.
Some vehicles use the battery isolation module to manage charging during start-stop events, so a fault may only appear under specific electrical load conditions.

Can I keep driving with U041A?

If the vehicle starts and runs normally with only the warning light on, you can drive to a repair shop, but avoid long trips and heavy electrical loads. If the vehicle exhibits reduced power, stalling, or charging system warnings, stop driving and seek professional diagnosis to prevent being stranded.

Tools that help

- OBD-II scan tool with CAN bus capabilities
- Digital multimeter
- Battery load tester
- Wiring diagram for the specific vehicle
- CAN bus breakout box or oscilloscope (optional for advanced diagnosis)



Reading U041A

- 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.
- 1A** The exact fault within that area.

Often seen with

P0562 System Voltage Low · **U0100** Lost Communication With ECM/PCM A · **U0140** Lost Communication With Instrument Panel Cluster · **U0415** Invalid Data Received From Anti-Lock Brake System Control Mo · **U0422** Invalid Data Received From Body Control Module

See it working

Watch the animated explainer [How Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u041a/>

