

GENERIC · NETWORK

U0641

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0641

Lost Communication With EVAP System Pressure Sensor/Switch Circuit A

This code means the powertrain control module (PCM) has lost communication with the evaporative emission (EVAP) system pressure sensor or switch circuit A, typically over a dedicated serial data line or a shared network segment. The PCM expects a regular signal from that sensor and has not received it for a calibrated amount of time, so it sets U0641 and may disable EVAP monitoring until communication returns.

SYSTEM

Network

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Network communication

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms besides the warning light.
- A pending or stored U0641 code in the PCM, sometimes accompanied by other communication or EVAP codes.
- The EVAP monitor may not run, leaving the emissions readiness status incomplete during an inspection.
- In rare cases, a rough idle or slight fuel smell if the sensor also provides a pressure input used for purge control.
- No drivability change in most vehicles because the EVAP pressure sensor is primarily an emissions component.

Common causes, most likely first

- 1 A faulty EVAP system pressure sensor or switch assembly that has stopped transmitting data.
- 2 Damaged, corroded, or disconnected wiring in the sensor's communication circuit, including the signal, power, and ground wires.
- 3 A poor electrical connection at the sensor connector or at the PCM connector, often due to water intrusion or terminal fretting.
- 4 An open or shorted serial data line between the EVAP pressure sensor and the PCM, sometimes caused by rodent damage or chafing.
- 5 A failed PCM driver or communication port, though this is less common than sensor or wiring faults.
- 6 Low battery voltage or a weak ground that disrupts communication on the sensor network.
- 7 Aftermarket accessories or improper repairs that tapped into the sensor's wiring and disturbed the signal.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related communication or EVAP codes that might point to a shared circuit fault.
- 2 Inspect the EVAP pressure sensor connector and wiring for corrosion, loose terminals, or physical damage, and repair as needed.
- 3 Check the sensor's power and ground circuits with a multimeter to confirm the sensor is receiving proper voltage and a good ground.
- 4 Test the communication line between the sensor and the PCM for continuity and shorts to ground or power, repairing any wiring fault found.
- 5 If wiring and power are good, substitute a known-good sensor or perform a bidirectional communication test to confirm the sensor is at fault.
- 6 Clear the code and perform a road test to verify communication is restored and the EVAP monitor runs to completion.
- 7 If the fault persists after all external checks, diagnose the PCM communication port and replace or reprogram the PCM only as a last resort.

What a lost EVAP sensor signal really means

- A U0641 is a communication code, not a direct sensor performance code, so replacing the sensor without checking the wiring often leads to a repeat repair.
- Some vehicles use the EVAP pressure sensor on a dedicated serial data bus, and a single chafed wire can take down communication without affecting how the engine runs.
- A weak or failing battery can cause intermittent communication codes on multiple modules, so always check battery voltage and ground quality before condemning parts.
- Aftermarket remote starters or alarm installations that splice into wiring near the EVAP system are a commonly overlooked cause of this code.
- The code can set even when the sensor is mechanically functional, because the PCM is looking for a digital message, not just an analog voltage.

Can I keep driving with U0641?

The vehicle is generally safe to drive because this fault affects emissions monitoring rather than engine operation, but avoid long trips until the cause is found in case the same wiring issue affects other systems. Have the circuit inspected soon so the EVAP monitor can complete and the check engine light can be cleared.



Tools that help

- OBD-II scan tool with live data and bidirectional communication capability
- Digital multimeter with back-probing pins
- Wiring diagram for the specific vehicle's EVAP and communication circuits
- Terminal pick and electrical contact cleaner
- Test light or logic probe for quick circuit checks

Reading U0641

U	Network: communication between the vehicle's control modules.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
6	Network communication.
41	The exact fault within that area.

Often seen with

P0450 Evaporative Emission System Pressure Sensor/Switch · **P0451** Evaporative Emission System Pressure Sensor/Switch Range/Per · **P0452** Evaporative Emission System Pressure Sensor/Switch Low · **P0453** Evaporative Emission System Pressure Sensor/Switch High · **U0640** Lost Communication With EVAP Fuel Vapor Temperature Sensor C

See it working

Watch the animated explainer [How a MAP Sensor Works: Engine Vacuum and Load](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0641/>

