



U045D

Invalid Data Received From Automated Driving System Control Module A

U045D means the module that coordinates automated driving features, often called the Automated Driving System Control Module A, has sent data that other modules on the vehicle network reject as invalid or out of range. The receiving module, typically the gateway or a chassis controller, sets this code when the payload fails its plausibility or checksum checks rather than when the module is simply offline.

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

Symptoms you may notice

- A warning light or message for the automated driving or advanced driver assistance system appears on the dash
- Adaptive cruise control, lane keeping, or automated parking features become unavailable or disable themselves
- The vehicle may default to manual driving with reduced driver-assist functionality
- Intermittent operation of driver-assist features, especially after a cold start or in damp weather
- Often no symptoms besides the warning light if the invalid data affects a non-critical message
- Other modules may log communication or configuration codes alongside U045D

Common causes, most likely first

- 1 Corroded, loose, or water-intruded connectors at the automated driving control module or its network gateway
- 2 A software calibration mismatch or failed update in the automated driving control module
- 3 Can bus wiring damage such as chafed or shorted twisted pair conductors between the module and the gateway
- 4 A failing automated driving control module that intermittently outputs corrupted frames
- 5 Low or unstable battery voltage causing the module to boot incorrectly and transmit invalid data
- 6 Aftermarket accessories or improper wiring repairs that disturb the controller area network (CAN) bus impedance
- 7 A gateway or receiving module with outdated software that misinterprets valid frames as invalid



How to diagnose and fix it

- 1 Scan all modules and record every stored and pending code before clearing anything, because U045D rarely travels alone
- 2 Inspect and clean the connectors and pins at the automated driving control module and the gateway, looking for corrosion or pushed-back terminals
- 3 Perform a voltage drop and battery health test to rule out low supply voltage as the source of corrupted data
- 4 Check for technical service bulletins and software updates for both the automated driving module and the gateway before replacing hardware
- 5 Measure CAN bus resistance and scope the bus for reflections, shorts, or noise that could corrupt frames
- 6 If wiring and software are sound, substitute a known-good automated driving control module and recheck for the code
- 7 After repair, clear codes and complete any required calibration or relearn procedure for the driver-assist sensors

Why invalid data is not a dead module

- Technicians often replace the automated driving control module immediately, but a single chafed CAN wire or a loose ground can produce the same invalid-data flag at a fraction of the cost.
- A weak battery that still starts the engine can drop voltage during module wake-up and cause the automated driving module to transmit malformed frames, so always load-test the battery first.
- This code can be set by the receiving module rather than the automated driving module itself, so the fault may live in the gateway or a shared network segment.
- Aftermarket dash cams, radar detectors, or phone chargers tapped into the wrong circuit can inject noise onto the bus and trigger U045D intermittently.
- Clearing the code without checking freeze-frame data erases the operating conditions that identify whether the fault is voltage, wiring, or software related.

Can I keep driving with U045D?

The vehicle remains safe to drive manually, but do not rely on automated driving or advanced driver-assist features until the fault is repaired. Avoid long trips that depend on adaptive cruise control or lane keeping, and have the network and module checked promptly if the warning persists.

Tools that help

- OBD-II scan tool with full module access and freeze-frame capability
- Digital multimeter with voltage drop and resistance functions
- Oscilloscope for CAN bus signal analysis
- Battery load tester and conductance tester
- Vehicle-specific wiring diagram and connector pinout reference
- Manufacturer diagnostic software for module calibration and relearn



Reading U045D

- 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.
- 5D** The exact fault within that area.

Often seen with

U0001 Loss of Bus Communication · **U0100** Lost Communication With ECM/PCM A · **U0122** Lost Communication With Vehicle Dynamics Control Module · **U045C** Invalid Data Received From Power Steering Control Module B · **U045E** Invalid Data Received From Automated Driving System Control

See it working

Watch the animated explainer [Excavator Simulator: Hydraulics You Can Operate](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u045d/>

