

GENERIC · NETWORK

U045F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U045F

Invalid Data Received From Automated Driving System Interface Module A

U045F is a communication fault where the module that coordinates automated driving features, such as adaptive cruise control and lane keeping, sends data that the receiving module judges invalid or out of range. The computer detected a message from the Automated Driving System Interface Module A that failed its plausibility or checksum validation, so it flagged the data as untrustworthy rather than treating it as a normal signal.

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

Symptoms you may notice

- Warning light or message for the automated driving system, adaptive cruise control, or lane keeping assist
- Adaptive cruise control or lane centering drops out or refuses to engage
- Forward collision warning or automatic emergency braking becomes unavailable
- A chime or cluster message stating that driver assist features are temporarily disabled
- Often no symptoms besides the warning light, with the vehicle driving normally in manual mode
- Intermittent operation of driver assist features that return after a key cycle

Common causes, most likely first

- Corroded, loose, or damaged wiring and connectors in the controller area network (CAN) bus between the automated driving interface module and its consumers
- Low or unstable battery voltage causing the interface module to transmit corrupted frames during startup or under load
- A software or calibration mismatch in the automated driving interface module after a battery replacement or module replacement
- A failing automated driving interface module that intermittently drops off the bus or sends out-of-range data
- A faulty sensor feeding the interface module, such as a camera or radar unit, causing it to relay implausible values
- Water intrusion or poor grounding at the interface module connector, common when the module is mounted low in the cabin or behind a trim panel
- A separate module on the same bus transmitting errors that disrupt communication with the interface module



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record the full freeze-frame data for U045F before clearing anything
- 2 Check battery voltage and charging system output, then load-test the battery because low voltage is a frequent cause of invalid data frames
- 3 Inspect the automated driving interface module connectors and the CAN bus wiring for corrosion, pin drag, chafing, and water intrusion
- 4 Verify the interface module is running the latest software and calibration, and reprogram it if a manufacturer update applies
- 5 Perform a wiggle test on the harness while watching live data for the interface module to catch intermittent connection faults
- 6 Substitute a known-good interface module or sensor only after wiring and power checks pass, then relearn or calibrate as required
- 7 Clear codes, complete a road test that activates the driver assist features, and confirm U045F does not return

Why invalid data is not always a bad module

- A weak battery or a poor ground can corrupt CAN frames and set U045F without any fault in the interface module itself, so power and ground checks come before parts replacement.
- The code points to invalid data rather than a missing message, which means the module is communicating but sending values the receiver rejects, often from a sensor feeding it bad input.
- After a module replacement or software flash, a missing calibration or incomplete initialization can trigger U045F until the learn procedure is finished.
- A camera or radar sensor that is misaligned or obstructed by dirt, snow, or a cracked lens can cause the interface module to relay implausible data and set this code.
- Technicians who replace the interface module first often find the code returns because the real fault is a chafed CAN wire or a failing sensor on the same bus.

Can I keep driving with U045F?

The vehicle remains safe to drive in manual mode because the fault affects driver assist features rather than steering, braking, or throttle control. Avoid relying on adaptive cruise control or lane keeping until the fault is repaired, and address the code promptly if the warning is accompanied by any loss of power steering assist or braking performance.



Tools that help

- OBD-II scan tool with manufacturer-level module access and live data
- Digital multimeter for voltage, resistance, and continuity checks
- CAN bus breakout box or oscilloscope for signal integrity testing
- Battery load tester and charging system analyzer
- Trim removal tools and contact cleaner for connector inspection
- Manufacturer diagnostic software for reprogramming and calibration

Reading U045F

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.
5F	The exact fault within that area.

Often seen with

U0100 Lost Communication With ECM/PCM A · **U0122** Lost Communication With Vehicle Dynamics Control Module · **U0401** Invalid Data Received From ECM/PCM · **U045E** Invalid Data Received From Automated Driving System Control · **U0460** Invalid Data Received From Automated Driving System Interfac

See it working

Watch the animated explainer **V6 Engine Explained: 60° Bank and Firing Order** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u045f/>

