

GENERIC · NETWORK

U301D

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U301D

Control Module Wake-up Circuit A Performance

U301D indicates that a control module responsible for waking up other modules on the vehicle's communication network has detected a performance fault in the wake-up circuit. The computer monitors the voltage or signal on the wake-up line and sets this code when the expected wake-up pattern is not seen within the required timing window.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Network	Generic (all makes)	Medium	Professional	Network wiring and bus faults

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the fault is intermittent.
- One or more modules may fail to power up, causing dead features such as no radio, no door locks, or no instrument cluster response.
- Intermittent no-start condition because the engine control module does not receive the wake-up signal.
- Battery drain if a module stays awake when it should sleep.
- Multiple unrelated warning lights or communication codes stored in several modules.
- Key fob or push-button start may require multiple presses before the vehicle responds.

Common causes, most likely first

- 1 Open or high-resistance wire in the wake-up circuit between the controlling module and the affected module.
- 2 Corroded or loose connector pins at either end of the wake-up circuit.
- 3 Failed control module that is supposed to generate or receive the wake-up signal.
- 4 Short to ground or short to voltage on the wake-up line, often from chafed wiring.
- 5 Low battery voltage or poor ground connection causing the wake-up signal to fall outside the expected range.
- 6 Aftermarket accessory improperly tapped into the wake-up circuit and loading it down.



How to diagnose and fix it

- 1 Verify battery state of charge and perform a voltage drop test on the main grounds before anything else.
- 2 Scan all modules for related communication codes and record which modules are not waking up.
- 3 Obtain the factory wiring diagram for the wake-up circuit and identify all connectors and splice points.
- 4 Backprobe the wake-up line at the controlling module and at the receiving module to compare signal voltage and timing.
- 5 Inspect connectors and wire harness routing for corrosion, chafing, or loose pins, especially near moving parts or heat sources.
- 6 Disconnect aftermarket accessories one at a time to see if the wake-up signal returns to normal.
- 7 If the wiring and connections test good, substitute a known-good module or perform a module wake-up test with a scan tool to isolate the faulty module.

Wake-up circuit faults that fool good technicians

- A weak battery can set U301D without any wiring fault because the wake-up signal voltage sags below the module's threshold during cranking.
- Aftermarket remote starters and alarm systems are a common hidden cause when they tap into the wake-up line and backfeed voltage.
- The code does not always mean the module itself is bad; a single chafed wire in a door jamb boot can interrupt the wake-up signal intermittently.
- Some vehicles use a dedicated wake-up wire while others use a network message, so the same code can point to completely different circuits depending on architecture.
- A module that stays awake and drains the battery may set U301D only after the battery voltage drops, leading technicians to replace a good battery instead of finding the wake-up fault.

Can I keep driving with U301D?

The vehicle may start and drive normally, but intermittent wake-up faults can leave you stranded if the engine control module does not power up. Avoid long trips and do not ignore a battery drain, because a module that stays awake can leave you with a dead battery.

Tools that help

- Scan tool with bidirectional module wake-up control
- Digital multimeter with min/max recording
- Factory wiring diagram or service information
- Backprobe pins and test leads
- Battery load tester and charger



Reading U301D

- U** Network: communication between the vehicle's control modules.
- 3** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Network wiring and bus faults.
- 1D** The exact fault within that area.

Often seen with

U0100 Lost Communication With ECM/PCM A · **U0140** Lost Communication With Instrument Panel Cluster · **U3000** Control Module · **U3001** Control Module Improper Shutdown Performance · **U3003** Battery Voltage

See it working

Watch the animated explainer [How a Manual Transmission Works: Four-Speed Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u301d/>

