

GENERIC · NETWORK

U301A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U301A

Control Module Wake-up Circuit A/Open

U301A indicates that a control module responsible for waking up other modules on the vehicle's communication network has detected an open circuit on the wake-up line, meaning the signal path is broken or disconnected. The module expects a voltage transition on the wake-up circuit but sees none, so it stores this code and may prevent certain modules from powering up when commanded.

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 affected module is not critical for engine operation.
- Intermittent failure of convenience features such as keyless entry, interior lighting, or power seats that rely on wake-up signals.
- A dead battery if the wake-up circuit remains active and keeps modules powered when the vehicle is off.
- Multiple unrelated warning lights or communication codes because several modules share the same wake-up line.
- No-start condition if the wake-up circuit feeds the powertrain control module or body control module.
- Modules that fail to respond to a scan tool or that drop offline intermittently.

Common causes, most likely first

- Broken, chafed, or corroded wire in the wake-up circuit between the controlling module and the affected module.
- Loose or corroded connector pins at either end of the wake-up circuit, especially in areas exposed to moisture.
- Failed control module that cannot generate or receive the wake-up signal.
- Blown fuse or faulty relay that supplies power to the wake-up circuit.
- Water intrusion or rodent damage in a harness that carries the wake-up line.
- Poor ground connection at the module or chassis, causing the wake-up circuit to appear open.



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes and freeze-frame data to identify which modules are offline and whether the wake-up circuit is shared.
- 2 Obtain the vehicle-specific wiring diagram and locate the wake-up circuit, including all connectors, splices, and fuses that feed it.
- 3 Visually inspect the harness and connectors for damage, corrosion, or loose pins, especially in areas prone to moisture or movement.
- 4 Use a digital multimeter to check for continuity and voltage on the wake-up wire while wiggling the harness to catch intermittent opens.
- 5 Check the fuse and relay that supply power to the wake-up circuit, and verify ground integrity at the controlling module.
- 6 If the circuit tests good, substitute a known-good module or perform a module swap test to confirm whether the controlling module is faulty.
- 7 Repair or replace the damaged wire, connector, or module as needed, then clear codes and verify the wake-up circuit operates correctly with a scan tool.

Wake-up circuit opens you might overlook

- A wake-up circuit open can be caused by a module that is not properly seated in its connector, so always check that all modules are fully plugged in before chasing wiring.
- The code may set intermittently due to a wire that only breaks contact when the vehicle is driven over bumps, so a wiggle test while monitoring live data is more reliable than a static continuity check.
- Some vehicles use a dedicated wake-up wire that is separate from the main CAN bus, and a fault there will not always set communication codes for the affected module.
- A weak or failing battery can cause modules to drop offline during cranking and set a false wake-up circuit code, so load-test the battery before replacing parts.
- Aftermarket accessories tapped into the wake-up circuit can introduce an open or excessive load that mimics a factory fault, so inspect for non-factory wiring.

Can I keep driving with U301A?

If the vehicle starts and runs normally, you can drive it to a repair shop, but avoid relying on features that depend on the affected module. If the engine cranks but does not start or multiple warning lights are on, have the vehicle towed to prevent further electrical damage.



Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter with continuity and voltage measurement
- Vehicle-specific wiring diagram
- Wire piercing probes or back-probe kit
- Trim removal tools for accessing harnesses

Reading U301A

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

Often seen with

U0140 Lost Communication With Instrument Panel Cluster · **U3000** Control Module · **U3001** Control Module Improper Shutdown Performance · **U3002** Vehicle Identification Number · **U3003** Battery Voltage

See it working

Watch the animated explainer [Fuel Trims Explained: Short-Term and Long-Term](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u301a/>

