

GENERIC · NETWORK

U0331

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0331

Software Incompatibility with Body Control Module 'A'

This code means the body control module (BCM) 'A' is running software that another module on the network cannot communicate with or verify as compatible. The computer detected a mismatch in software version, calibration, or handshake protocol between the BCM and a peer module, so it flagged the incompatibility.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Network	Generic (all makes)	Medium	Professional	Software and configuration mismatches

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the mismatch is minor or affects only non-critical features.
- Intermittent or complete failure of body functions such as power windows, door locks, interior lighting, or remote keyless entry.
- Battery drain or a no-start condition if the BCM remains awake due to failed communication handshakes.
- Multiple unrelated warning lights or U-codes stored in other modules because the network cannot coordinate properly.
- Erratic operation of climate control, wipers, or turn signals if those features are routed through the BCM.
- A message on the driver information center stating a module is not compatible or requires service.

Common causes, most likely first

- A recent software update or reflash applied to one module but not the BCM, creating a version mismatch.
- Replacement of the BCM with a used or aftermarket unit that carries the wrong calibration for the vehicle.
- Corrupted or incomplete software installation during a prior repair or programming event.
- A faulty BCM with internal memory corruption that prevents it from reporting a valid software identifier.
- Network communication faults, such as a damaged CAN bus wire or poor ground, that cause the BCM handshake to fail intermittently.
- Low battery voltage or a weak charging system that interrupts module programming or causes the BCM to boot with incomplete data.
- Aftermarket electronic accessories that interfere with the network or inject false messages the BCM cannot reconcile.



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes in every module, then clear codes and verify whether U0331 returns immediately or only after a drive cycle.
- 2 Check battery voltage and charging system output, as low voltage is a common trigger for communication and software handshake faults.
- 3 Inspect the BCM connectors and the network wiring for corrosion, loose pins, or chafed wires, especially at the BCM and any inline connectors.
- 4 Use the scan tool to read the software part number and calibration ID of the BCM and compare it with the latest known-good version for the vehicle.
- 5 Perform a module reprogramming or software update on the BCM using the manufacturer's diagnostic software, following the guided procedure exactly.
- 6 If reprogramming fails or the BCM will not accept the correct software, replace the BCM with a new or correctly calibrated unit and program it to the vehicle.
- 7 After repair, clear all codes, perform a full network scan, and road-test the vehicle through several drive cycles to confirm the code does not return.

Why a simple reflash often fixes U0331

- A dead or replaced battery can cause this code because the BCM may lose its learned software handshake data when voltage drops during cranking, and a simple relearn procedure may resolve it.
- Technicians often replace the BCM when the real fault is a single chafed CAN wire that intermittently corrupts the handshake message, so always inspect wiring before condemning the module.
- This code can be set by a module other than the BCM if that module cannot verify the BCM's software, so the fault may actually reside in the peer module or its programming.
- Aftermarket remote starters and alarm systems that tap into the network can inject messages that confuse the BCM and trigger U0331 without any factory software problem.
- Some vehicles require a specific sequence of ignition cycles and module sleeps after programming for the BCM to register the new software, and skipping that sequence leaves the code stored.

Can I keep driving with U0331?

The vehicle is generally safe to drive if the only symptom is a warning light, but avoid long trips until the fault is diagnosed because a failing BCM can suddenly disable body functions or cause a battery drain. If the engine stalls, the transmission behaves erratically, or multiple warning lights appear, stop driving and have the vehicle towed to a repair facility.



Tools that help

- OBD-II scan tool with full module scanning and live data capability
- Manufacturer-specific diagnostic software or a J2534 pass-thru device for reprogramming
- Digital multimeter for voltage and continuity checks
- Wiring diagram and connector pinout for the BCM and network
- Battery load tester and charging system tester

Reading U0331

U Network: communication between the vehicle's control modules.

0 Generic (SAE) code: it means the same thing on every OBD-II vehicle.

3 Software and configuration mismatches.

31 The exact fault within that area.

Often seen with

U0001 Loss of Bus Communication · **U0100** Lost Communication With ECM/PCM A · **U0121** Lost Communication With Anti-Lock Brake System (ABS) Control · **U0140** Lost Communication With Instrument Panel Cluster · **U0155** Lost Communication With Body Control Module

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/u0331/>

