

GENERIC · NETWORK

U0597

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0597

Invalid Data Received From AC/DC Converter Control Module A

U0597 is a communication fault indicating that a control module on the vehicle's network received invalid or corrupted data from the AC/DC Converter Control Module A, which is the module responsible for managing high-voltage to low-voltage power conversion in electrified vehicles. The receiving module detected that the data frames from the converter module did not match the expected format, checksum, or signal range, so it flagged the message as invalid rather than trusting it.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Network	Generic (all makes)	Medium	Professional	Network communication

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message with no noticeable change in vehicle behavior
- A warning message on the dashboard indicating a fault with the high-voltage system or power converter
- Reduced or disabled accessory power operation, such as the 12-volt charging system not maintaining battery voltage
- The vehicle may refuse to enter ready mode or may shut down the high-voltage system unexpectedly
- Intermittent electrical gremlins such as flickering interior lights or accessories cutting in and out

Common causes, most likely first

- 1 Corroded, loose, or damaged wiring and connectors in the AC/DC converter module's communication circuit
- 2 A failing AC/DC converter control module that is internally corrupting its own data messages
- 3 Low or unstable 12-volt battery voltage causing the converter module to send malformed data frames
- 4 A software or calibration issue in the converter module or the receiving module that misinterprets valid data
- 5 Electromagnetic interference or a short in the communication bus wiring near high-voltage cables
- 6 A faulty ground connection for the AC/DC converter module causing reference voltage shifts and data errors



How to diagnose and fix it

- 1 Perform a full scan of all modules to confirm U0597 is current and check for related communication or voltage codes
- 2 Inspect and test the 12-volt battery and charging system, as low voltage is a common cause of invalid data messages
- 3 Locate the AC/DC converter control module and inspect its connectors and wiring for corrosion, chafing, or loose pins
- 4 Check the communication bus resistance and continuity from the converter module to the receiving module
- 5 Verify the converter module's ground circuit and power supply under load to rule out voltage drops
- 6 If wiring and power are good, check for technical service bulletins or software updates for the converter module
- 7 Substitute a known-good AC/DC converter control module only after all wiring and power checks pass, then clear codes and retest

Why invalid data is not always a bad module

- A weak or failing 12-volt battery often causes modules to send corrupted data frames, so load-test the battery before condemning the converter module.
- The AC/DC converter control module is sometimes called the DC-DC converter, and on some vehicles it shares a communication bus with the onboard charger, so faults there can set U0597 indirectly.
- U0597 can be stored intermittently by a single corrupted message during a low-voltage event such as engine cranking, so check for history codes and freeze-frame data before replacing parts.
- Corrosion inside a connector that looks fine from the outside is a frequent culprit, especially on vehicles driven in wet or salty conditions, so always back-probe terminals under load.
- After repairing the fault, some vehicles require a module relearn or a drive cycle before the code will clear permanently, and a simple code erase may not be enough.

Can I keep driving with U0597?

If the vehicle drives normally and only the warning light is on, you can drive short distances to a repair shop, but avoid long trips or heavy electrical loads. If the high-voltage system disables or the vehicle will not start, stop driving and have it towed to prevent further damage or safety risk.

Tools that help

- OBD-II scan tool with full module communication and live data capability
- Digital multimeter with min/max recording for voltage and resistance tests
- Battery load tester or conductance tester
- Wiring diagram and connector pinout for the AC/DC converter module circuit
- Back-probe kit and terminal cleaning tools



Reading U0597

- U** Network: communication between the vehicle's control modules.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Network communication.
- 97** The exact fault within that area.

Often seen with

P0A94 DC/DC Converter A Performance · **U0100** Lost Communication With ECM/PCM A · **U0140** Lost Communication With Instrument Panel Cluster · **U0596** Invalid Data Received From AC/AC Converter Control Module · **U0598** Invalid Data Received From AC/DC Converter Control Module B

See it working

Watch the animated explainer [How a Turbocharger Works, Step by Step](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0597/>

