

GENERIC · NETWORK

U0638

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0638

Lost Communication With Hybrid/EV Electronics Coolant Temperature Sensor A

U0638 is a network communication code indicating that a control module on the vehicle's data bus has lost contact with the hybrid or electric vehicle electronics coolant temperature sensor 'A' circuit. The computer did not detect an out-of-range temperature reading; instead, it noticed that messages from that sensor or its reporting module stopped arriving within the expected time window.

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 a dedicated hybrid system warning lamp
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced hybrid system power or a forced limp-home mode in some vehicles
- Electric cooling fans running continuously or not running at all
- Inaccurate or missing coolant temperature information on the dashboard or scan tool
- Possible charging system or battery thermal management warnings if the sensor is shared with those systems

Common causes, most likely first

- 1 Damaged, corroded, or disconnected wiring or connector pins at the coolant temperature sensor
- 2 Open or shorted sensor signal circuit between the sensor and its reporting control module
- 3 Failed hybrid/EV electronics coolant temperature sensor itself
- 4 Faulty reporting module (such as the hybrid control module) that is not transmitting sensor data on the bus
- 5 Low voltage or poor grounds affecting the module that publishes the sensor message
- 6 CAN bus communication faults elsewhere on the network that disrupt the sensor message
- 7 Aftermarket accessories or poor previous repairs introducing interference or incorrect wiring



How to diagnose and fix it

- 1 Connect a scan tool and record all stored and pending codes in every module, not just the engine controller
- 2 Inspect the coolant temperature sensor connector and harness for corrosion, chafing, or loose pins
- 3 Check the sensor's resistance or voltage output against the manufacturer's specification while monitoring live data
- 4 Verify the reporting module has good power and ground connections and is communicating on the bus
- 5 Perform a voltage drop test on the sensor signal and return circuits to rule out high resistance
- 6 If the sensor tests bad, replace it and clear the code; if the module is not transmitting, diagnose the module or its bus wiring
- 7 After repairs, road test the vehicle through several warm-up cycles to confirm the code does not return

What most technicians miss on U0638

- A U0638 can be set by a completely different module dropping off the bus, because the sensor message may be relayed through a gateway or hybrid controller rather than sent directly by the sensor.
The coolant temperature sensor on a hybrid or EV often shares a circuit with battery thermal management, so a fault here can cause charging or power-limiting symptoms that look unrelated to coolant.
- Intermittent U0638 codes frequently trace to a connector that passes through a splash zone or near a heat source, where the pins look fine but lose contact only when hot or wet.
- Replacing the sensor without checking the reporting module's power and ground is a common misdiagnosis, because a module with low voltage can stop transmitting without setting its own code.
Some vehicles require a relearn or adaptation after sensor replacement, and skipping it can leave the code stored even though the hardware is good.

Can I keep driving with U0638?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, long trips, or towing because the hybrid system may limit power or cooling without warning. If the vehicle enters limp mode or shows a red hybrid warning, stop safely and arrange a tow.

Tools that help

- OBD-II scan tool with live data and module communication capability
- Digital multimeter with resistance and voltage drop functions
- Manufacturer-specific wiring diagram for the hybrid/EV coolant temperature circuit
- Back probe pins and terminal test kit
- Insulated hand tools and connector release tools



Reading U0638

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

Often seen with

P0A3F Drive Motor A Position Sensor Circuit · **P0C73** Hybrid Battery Pack Cooling Pump Performance · **U0100** Lost Communication With ECM/PCM A · **U0637** Lost Communication With Hybrid/EV Battery Pack Coolant Contr · **U0639** Lost Communication With Hybrid/EV Electronics Coolant Temper

See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0638/>

