

GENERIC · NETWORK

U0636

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0636

Lost Communication With Hybrid/EV Battery Pack Coolant Control Valve A

U0636 is a network communication fault indicating that one or more control modules have lost contact with the hybrid or electric vehicle battery pack coolant control valve A over the vehicle's data bus. The computer has detected that expected messages from the valve actuator or its control module are missing for a calibrated period, which prevents the system from regulating battery coolant flow as designed.

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

Symptoms you may notice

- Illumination of the check engine light or a dedicated hybrid system warning lamp on the dashboard.
- Often no symptoms besides the warning light, especially if the valve fails in a position that still allows adequate coolant circulation.
- Reduced hybrid or electric driving performance with a message to service the high-voltage battery cooling system.
- Overheating warnings for the high-voltage battery pack, which may trigger power limiting or a forced shutdown.
- Inconsistent cabin heating or cooling if the coolant control valve also manages the cabin heat exchanger circuit.
- A stored communication code that returns immediately after clearing, even when the valve appears to move freely.

Common causes, most likely first

- 1 A failed coolant control valve actuator motor or internal position sensor that no longer responds to commands.
- 2 Damaged, corroded, or disconnected electrical connector at the valve, often from coolant seepage or road splash.
- 3 A break or short in the wiring harness between the valve and its control module, frequently near sharp brackets or heat sources.
- 4 Loss of power or ground to the valve control circuit due to a blown fuse or degraded splice.
- 5 A software or calibration issue in the module that supervises the valve, requiring a reflash or update.
- 6 A faulty control module on the communication bus that is disrupting messages to and from the valve.
- 7 Low coolant level or air pockets causing the valve to overheat and shut down its electronics intermittently.



How to diagnose and fix it

- 1 Verify battery voltage and inspect all fuses and grounds that feed the coolant control valve circuit before condemning any component.
- 2 Perform a visual inspection of the valve connector and harness for corrosion, chafing, coolant residue, or loose pins, then clean and reseat as needed.
- 3 Use a scan tool to command the coolant control valve through its full range and watch live position data to confirm whether the actuator responds.
- 4 Check for communication on the relevant data bus with a multimeter or oscilloscope to rule out a bus-wide fault before replacing the valve.
- 5 Measure resistance and voltage at the valve connector and compare with manufacturer specifications to isolate a wiring fault from a failed valve.
- 6 If the valve is mechanically free but electrically unresponsive, replace the coolant control valve assembly and clear the code.
- 7 After repair, clear codes, perform any required valve calibration or coolant bleed procedure, and road test to confirm the code does not return.

What a missing valve message really means

- A coolant control valve that is mechanically stuck but still electrically alive will usually set a performance code rather than U0636, so this code points first to power, ground, or data communication rather than a blocked coolant passage.
- Technicians often replace the valve only to find the real fault is a corroded connector pin hidden behind the valve body, so a pin drag test and voltage drop check are essential before parts are ordered.
- Because the valve shares a communication bus with other modules, a single failing module elsewhere on the network can interrupt messages and set U0636 even though the valve itself is healthy.
- Some vehicles will not run the battery cooling pump or allow full charge and discharge rates while this code is active, so the fault can look like a battery problem when it is purely a valve communication issue.
- After replacing the valve, many platforms require a relearn or end-stop calibration through the scan tool; skipping that step will set the code again on the first key cycle.

Can I keep driving with U0636?

It is generally safe to drive a short distance to a repair shop if the vehicle is not showing overheating warnings, but avoid sustained high-speed driving, rapid charging, and heavy electrical loads until the fault is repaired. If the battery temperature gauge climbs or the vehicle enters reduced power mode, stop driving and have it towed to prevent damage to the high-voltage battery pack.



Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter with back-probe pins
- Automotive oscilloscope for data bus signal verification
- Socket and wrench set for valve replacement
- Coolant drain pan and hose clamp pliers
- Manufacturer service information for wiring diagrams and calibration procedures

Reading U0636

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.
36	The exact fault within that area.

Often seen with

P0A93 Inverter A Cooling System Performance · **P0C73** Hybrid Battery Pack Cooling Pump Performance · **U0100** Lost Communication With ECM/PCM A · **U0635** Lost Communication With Hybrid/EV Battery Pack Coolant Tempe · **U0637** Lost Communication With Hybrid/EV Battery Pack Coolant Contr

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0636/>

