

GENERIC · NETWORK

U063F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U063F

Lost Communication With Engine Coolant Flow Control Valve Position Sensor

U063F is a generic network communication code indicating that a control module on the vehicle's Controller Area Network (CAN) bus has lost contact with the engine coolant flow control valve position sensor. The module that monitors this sensor, typically the engine control module or a dedicated valve controller, expected a regular data message from the sensor and did not receive it within the required time window.

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 service vehicle soon message with no other obvious change in vehicle behavior
- Intermittent or permanent loss of cabin heat because the coolant flow control valve defaults to a fixed position
- Engine temperature gauge reading abnormally high or low, or fluctuating erratically
- Reduced engine performance or limp-home mode triggered by the module that lost the sensor signal
- A stored code in multiple modules indicating a communication fault on the same network segment
- Often no symptoms besides the warning light when the fault is intermittent and the valve remains functional

Common causes, most likely first

- 1 Damaged, corroded, or disconnected electrical connector at the coolant flow control valve position sensor
- 2 Chafed, open, or shorted wiring in the sensor circuit between the valve and the control module
- 3 Failed coolant flow control valve position sensor internal electronics
- 4 Faulty coolant flow control valve actuator that prevents the sensor from reporting a plausible position
- 5 Low system voltage or a weak battery causing modules to drop network messages intermittently
- 6 Water or coolant intrusion into the sensor connector or valve housing corroding the terminals
- 7 A software or calibration issue in the control module that monitors the sensor signal



How to diagnose and fix it

- 1 Inspect the coolant flow control valve position sensor connector for corrosion, loose pins, or coolant residue and clean or repair as needed
- 2 Check the sensor wiring harness for chafing, opens, and shorts using a wiring diagram and a multimeter
- 3 Measure sensor reference voltage and ground at the connector to confirm the module is supplying power and ground
- 4 Verify battery voltage and charging system output because low voltage can cause intermittent communication faults
- 5 Perform a bidirectional scan tool test of the coolant flow control valve to command movement and observe position sensor feedback
- 6 If the sensor signal is missing at the module but present at the sensor, diagnose the communication bus segment between them
- 7 Replace the coolant flow control valve position sensor or the complete valve assembly only after electrical and communication tests confirm the fault

What the U063F code does not always mean

- A U063F code does not automatically mean the position sensor has failed, because a loose ground or low battery voltage can interrupt the network message and set the same code
- Technicians often replace the coolant flow control valve only to find the real fault is a chafed wire behind the engine block that shorts only when the engine moves under load
- This code can be set by a completely different module on the same CAN segment going offline, so always check for other U-codes before condemning the valve sensor
- Coolant intrusion into the sensor connector is a common missed cause on vehicles with plastic valve housings, and the corrosion may be hidden inside the boot
- The valve may still mechanically function while the position sensor feedback is lost, so a lack of cabin heat is not a reliable indicator of sensor failure

Can I keep driving with U063F?

The vehicle is generally safe to drive short distances because the coolant flow control valve usually defaults to a fixed position, but avoid sustained high-speed driving or heavy loads until the fault is repaired. If the engine temperature gauge climbs into the red or the vehicle enters limp mode, stop driving and have it towed.

Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter with back-probing pins
- Wiring diagram for the coolant flow control valve circuit
- Socket set and trim removal tools
- Battery load tester or charging system tester



Reading U063F

- 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.
- 3F** The exact fault within that area.

Often seen with

P0128 Coolant Thermostat (Coolant Temperature Below Thermostat Reg · **P2183** Engine Coolant Temperature Sensor 2 Circuit Range/Performanc · **U0100** Lost Communication With ECM/PCM A · **U0140** Lost Communication With Instrument Panel Cluster · **U063E** Lost Communication With Exhaust Heat Exchanger Bypass Valve

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/u063f/>

