

GENERIC · NETWORK

U3549

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U3549

Hydrogen Tank High Pressure Sensor 1 Circuit

This code means the powertrain control module (PCM) has detected an abnormal signal on the circuit for the high-pressure sensor mounted on the vehicle's hydrogen tank. The PCM compares the sensor's voltage against expected values for the tank pressure and flags the circuit when the reading falls outside the valid range or behaves erratically.

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

Symptoms you may notice

- Illuminated malfunction indicator lamp (MIL) with no other noticeable symptoms in many cases
- Reduced power or a limp-home mode triggered by the PCM to protect the hydrogen system
- A message on the instrument cluster warning of a hydrogen system fault or low tank pressure
- Rough running or stalling if the PCM cannot determine available fuel pressure
- Inability to refuel the hydrogen tank because the refueling control module sees an invalid pressure signal
- In rare cases, a noticeable hydrogen odor if the sensor fault coincides with a real leak

Common causes, most likely first

- 1 Faulty high-pressure sensor on the hydrogen tank
- 2 Damaged, chafed, or corroded wiring in the sensor circuit
- 3 Loose or corroded electrical connector at the sensor or PCM
- 4 High resistance or an open circuit in the sensor ground or reference voltage wire
- 5 PCM internal fault affecting the sensor input circuit
- 6 Mechanical damage to the sensor from impact or improper service
- 7 Contamination or moisture intrusion into the connector causing signal distortion



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the code is current and not history
- 2 Visually inspect the sensor, connector, and wiring harness for damage, corrosion, or loose pins
- 3 Measure sensor reference voltage and ground at the connector with a digital multimeter
- 4 Back-probe the signal wire and compare the sensor voltage against the manufacturer's pressure-to-voltage chart
- 5 Perform a wiggle test on the harness while watching live sensor data to reveal intermittent faults
- 6 If the circuit checks out, replace the high-pressure sensor and clear the code
- 7 Verify the repair by running the vehicle and confirming the sensor reading tracks actual tank pressure

Hydrogen sensor faults that fool technicians

- A loose ground strap on the hydrogen tank can cause a valid sensor to report erratic pressure, so check chassis grounds before condemning the sensor.
- The PCM may set this code when the sensor signal is plausible but stuck, so live data comparison during a refueling event is more revealing than a static voltage check.
- Aftermarket electrical accessories tapped into the same ground circuit can introduce noise that mimics a failing sensor, so inspect for non-factory wiring.
- A low 12-volt battery or poor charging system can cause reference voltage instability that sets this code without any sensor fault at all.
- This code does not always mean the tank pressure is actually wrong; the PCM only knows the circuit signal is outside its expected range.

Can I keep driving with U3549?

You can usually drive the vehicle to a service center, but avoid aggressive acceleration and do not attempt to refuel until the fault is diagnosed, because the refueling system may reject the tank based on the invalid pressure signal.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter with back-probe pins
- Manufacturer service information for pressure-to-voltage specifications
- Insulated hand tools for connector and sensor service
- Leak detection solution approved for hydrogen systems



Reading U3549

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

Often seen with

U0100 Lost Communication With ECM/PCM A · **U3548** High Voltage System Interlock Circuit P High · **U3550** Hydrogen Tank A Valve Control Circuit

See it working

Watch the animated explainer [Master the Four-Stroke Engine Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u3549/>

