

GENERIC · NETWORK

U3555

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U3555

Hydrogen Tank B Valve Performance

U3555 indicates that the powertrain control module (PCM) has detected a performance fault with the hydrogen tank B valve, which is part of the high-pressure hydrogen storage system on fuel-cell vehicles. The PCM monitors the valve's response to commands and sets this code when the valve does not open, close, or seal as expected within the calibrated time or pressure parameters.

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

Symptoms you may notice

- Illumination of the malfunction indicator lamp (MIL) on the dashboard
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced power or a fail-safe mode that limits vehicle speed
- Inability to refuel the hydrogen tank or a refueling station that aborts the fill
- Rough running or stalling if the valve affects fuel delivery to the fuel cell stack
- Audible hissing or abnormal pressure release from the tank area in severe cases

Common causes, most likely first

- 1 Faulty hydrogen tank B valve solenoid or internal mechanical binding
- 2 Damaged or corroded electrical connector or wiring to the valve
- 3 Low or contaminated hydrogen supply causing valve performance issues
- 4 Sticking valve due to debris or ice formation in the hydrogen system
- 5 Failed tank pressure sensor providing incorrect feedback to the PCM
- 6 PCM software calibration issue or internal driver fault for the valve circuit

How to diagnose and fix it

- 1 Connect a scan tool and verify U3555 is current, then check for related codes and freeze-frame data
- 2 Inspect the valve electrical connector and wiring for corrosion, damage, or loose pins
- 3 Measure the valve solenoid resistance and compare to the manufacturer's specification
- 4 Command the valve open and closed with the scan tool while monitoring pressure changes and listening for actuation
- 5 Check hydrogen tank pressure and verify the system is properly filled and free of contamination
- 6 If the valve fails to respond correctly, replace the hydrogen tank B valve following all safety procedures
- 7 After repair, clear codes and perform a road test or refueling event to confirm the fix



Hydrogen valve faults that mimic other issues

- A weak or failing 12-volt battery can cause erratic valve operation and set U3555 without any valve defect.
- The code often sets intermittently due to a poor ground connection at the valve body rather than a failed valve.
- Technicians sometimes replace the valve when the real problem is a skewed tank pressure sensor reporting false data.
- Hydrogen system safety protocols require depressurizing the tank before any valve service, which is not a DIY job.
- U3555 can be triggered by a refueling station that delivers contaminated hydrogen, so check fuel quality records.

Can I keep driving with U3555?

Do not continue driving with U3555 until the hydrogen system has been inspected by a qualified technician, because a faulty tank valve can cause a dangerous pressure release or leave the vehicle without power. If the vehicle must be moved, drive it only a short distance directly to a service facility and avoid refueling.

Tools that help

- OBD-II scan tool with manufacturer-specific hydrogen system support
- Digital multimeter for resistance and voltage checks
- Hydrogen leak detector
- Manufacturer service information for valve testing and safety procedures
- Insulated hand tools and personal protective equipment

Reading U3555

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.
55	The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A1F** Battery Energy Control Module A Performance · **U0100** Lost Communication With ECM/PCM A · **U3554** Hydrogen Tank B Valve Enable Circuit · **U3556** Hydrogen Tank C Valve Control Circuit



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/u3555/>

