

GENERIC · NETWORK

U3556

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U3556

Hydrogen Tank C Valve Control Circuit

U3556 is a generic network code indicating that the hydrogen tank C valve control circuit has a fault, meaning the powertrain control module (PCM) or hydrogen system controller has detected an abnormal electrical condition on the control wire for that specific tank valve. The computer monitors the circuit for expected voltage or current and sets this code when the signal is out of range, open, or shorted.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Network	Generic (all makes)	Medium	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 valve is not actively commanded during normal driving.
- Reduced hydrogen supply or inability to pressurize the system, leading to limited power or a no-start condition.
- Rough running or stalling if the valve fails to open when hydrogen is demanded.
- Audible clicking or no click from the valve area when the ignition is turned on, depending on failure mode.
- Possible other warning messages related to the hydrogen system or reduced range.

Common causes, most likely first

- 1 Damaged or corroded wiring harness or connector at the hydrogen tank C valve.
- 2 Failed hydrogen tank C valve solenoid (open or shorted coil).
- 3 Blown fuse or faulty relay supplying power to the valve control circuit.
- 4 Poor ground connection for the valve or controller.
- 5 Faulty hydrogen system controller or PCM driver circuit.
- 6 Water or debris intrusion into the connector causing high resistance.
- 7 Aftermarket accessories or improper previous repairs disturbing the circuit.



How to diagnose and fix it

- 1 Perform a visual inspection of the hydrogen tank C valve connector and wiring for damage, corrosion, or loose pins.
- 2 Check the fuse and relay associated with the hydrogen tank valve control circuit and replace if faulty.
- 3 Measure resistance of the valve solenoid and compare to specification to rule out an open or shorted coil.
- 4 Backprobe the control circuit at the valve and at the controller to check for voltage and ground signals during command.
- 5 Inspect and clean ground connections for the valve and controller, verifying low resistance to battery negative.
- 6 If wiring and valve test good, diagnose the controller output with a scan tool and oscilloscope to confirm driver failure.
- 7 Repair or replace the faulty component (wiring, valve, or controller) and clear the code, then verify the circuit operates correctly.

Hydrogen valve circuit diagnosis pitfalls

- A failed hydrogen tank valve solenoid often tests fine when cold but fails when hot, so resistance checks should be done both cold and after warming the component.
- The code can be set by a momentary glitch from low battery voltage during cranking, so always check battery health and charging system before condemning the valve.
- Corrosion inside the connector pins is a common cause that visual inspection alone may miss; a voltage drop test under load is more reliable.
- Some vehicles require a relearn or initialization procedure after valve replacement, and skipping it can cause the code to reset even with good hardware.
- The control circuit may share a ground with other hydrogen system components, so a fault elsewhere can set U3556 as a secondary code.

Can I keep driving with U3556?

If the vehicle drives normally and only the warning light is on, you can drive to a service location, but avoid hard acceleration or high-demand situations that could stress the hydrogen system. If the vehicle exhibits reduced power, stalling, or a no-start condition, stop driving and have it towed to avoid safety risks.

Tools that help

- OBD-II scan tool with manufacturer-specific software
- Digital multimeter
- Oscilloscope
- Wire repair kit and terminal pick tools
- Service information for circuit diagrams and specifications



Reading U3556

- 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.
- 56** The exact fault within that area.

Often seen with

U0100 Lost Communication With ECM/PCM A · **U3555** Hydrogen Tank B Valve Performance · **U3557** Hydrogen Tank C Valve Enable 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/u3556/>

