



U042F

Invalid Data Received From Camshaft Position Control Module

U042F means the module that monitors camshaft position received data from the camshaft position control module that it judged invalid or out of range for the current operating conditions. The receiving module sets this communication code when the expected camshaft position signal is missing, implausible, or contradicts other sensor data, rather than when the control module is simply offline.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Network	Generic (all makes)	Medium	Professional	Invalid data received from a module

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message, often with no other symptoms besides the warning light
- Rough idle, stumbling, or intermittent misfire as variable valve timing fails to respond correctly
- Reduced engine power or limp-home mode triggered by the powertrain control module when camshaft data is deemed untrustworthy
- Poor fuel economy or elevated emissions readings noticed over several drive cycles
- Hard starting or a crank-no-start condition in severe cases where camshaft position is used for synchronization
- Other communication or performance codes stored alongside U042F in modules that share the same network

Common causes, most likely first

- 1 Faulty camshaft position control module or its internal signal processing circuit
- 2 Damaged, corroded, or chafed wiring in the camshaft position sensor or control module circuit
- 3 Poor ground connection or voltage supply issue at the camshaft position control module
- 4 Contaminated or failing camshaft position sensor producing an erratic signal
- 5 Mechanical timing problems such as a stretched timing chain or worn variable valve timing phaser
- 6 CAN bus communication faults or a module on the same network corrupting the data frame
- 7 Software calibration issue in the receiving module that misinterprets valid camshaft data



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data to see when U042F set
- 2 Inspect the camshaft position sensor and control module connectors for corrosion, loose pins, and chafed wiring
- 3 Measure reference voltage, ground continuity, and signal waveform at the camshaft position sensor with a multimeter or oscilloscope
- 4 Check the camshaft position control module power and ground circuits under load and verify the module wakes up correctly
- 5 Compare live camshaft position data against crankshaft position data during cranking and running to confirm signal plausibility
- 6 Perform a network integrity check on the CAN bus and look for other modules dropping offline intermittently
- 7 After repairs, clear codes and complete a drive cycle that includes variable valve timing activation to confirm U042F does not return

Why camshaft data gets rejected as invalid

- U042F is a data-validity code, not a no-communication code, so the camshaft position control module may still be powered and communicating while its reported position value is rejected as implausible.
- A stretched timing chain or worn variable valve timing phaser can shift camshaft timing far enough that the receiving module flags the data as invalid even though the sensor and wiring test perfectly.
- Technicians often replace the camshaft position sensor first, but the fault frequently lies in the control module's ground circuit or in a shared CAN bus segment that intermittently corrupts the data frame.
- This code can be set by a low or unstable battery voltage during cranking, so check battery health and charging system output before condemning any module.
- Other modules on the same network can store U-codes alongside U042F, and those companion codes often point to the true root cause faster than the camshaft circuit itself.

Can I keep driving with U042F?

The vehicle is usually safe to drive short distances to a repair shop, but avoid heavy acceleration, towing, or long highway trips because invalid camshaft data can cause misfires, reduced power, or a sudden limp-home event. If the engine runs roughly, stalls, or refuses to restart, stop driving and arrange a tow.

Tools that help

- OBD-II scan tool with bidirectional module access and live data capability
- Digital multimeter with min/max recording
- Oscilloscope for camshaft and crankshaft signal waveform analysis
- Wiring diagram and connector pinout for the camshaft position circuit
- CAN bus network tester or breakout box
- Basic hand tools for connector and sensor access



Reading U042F

- U** Network: communication between the vehicle's control modules.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 4** Invalid data received from a module.
- 2F** The exact fault within that area.

Often seen with

P0016 Crankshaft/Camshaft Position Correlation (Bank 1 Sensor A) · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P0341** Camshaft Position Sensor A Circuit Range/Performance · **P0365** Camshaft Position Sensor 'B' Circuit (Bank 1) · **U0100** Lost Communication With ECM/PCM A

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/u042f/>

