

GENERIC · POWERTRAIN

P0913

OBD-II TROUBLE CODE

P0913

Gate Select Actuator Circuit High

P0913 indicates that the transmission control module (TCM) has detected an abnormally high voltage on the gate select actuator circuit, which is part of the gear shift control system in vehicles with an automated manual or dual-clutch transmission. The TCM expects a certain voltage range when commanding the actuator, and a reading above the threshold triggers this code, often resulting in the transmission failing to engage the requested gear.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	High	Professional	Transmission

Symptoms you may notice

- The transmission may refuse to shift into certain gears or may stay in neutral.
- The gear indicator on the dashboard may flash or show an incorrect gear.
- The vehicle may enter limp mode, limiting speed and engine power.
- A warning light or message such as 'Transmission Fault' appears on the instrument cluster.
- The engine may start but the vehicle will not move when a gear is selected.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- A faulty gate select actuator solenoid or motor with an open or shorted winding.
- Damaged or corroded wiring harness between the TCM and the actuator, including chafed wires or broken connectors.
- High resistance in the actuator circuit due to loose or oxidized ground connections.
- A failed transmission control module (TCM) driver circuit for the actuator.
- Mechanical binding in the shift gate mechanism that overloads the actuator and causes high current draw.
- Water intrusion into the actuator connector or TCM connector causing corrosion and voltage spikes.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related transmission codes before clearing.
- 2 Inspect the gate select actuator connector and wiring for corrosion, damage, or loose pins; repair as needed.
- 3 Measure resistance across the actuator solenoid and compare to the manufacturer's specification; replace if out of range.
- 4 Check the actuator circuit for short to power or open circuits using a multimeter and wiring diagram.
- 5 Test the TCM output signal to the actuator with an oscilloscope or a bidirectional scan tool to confirm the command.
- 6 If the actuator and wiring are good, substitute a known-good TCM or reprogram the existing module as required.
- 7 Clear the code and perform a transmission adaptation or relearn procedure if applicable to the vehicle.

Gate select actuator circuit pitfalls

- A high voltage code often results from a short to power in the wiring, not a failed actuator, so always check for chafed wires near hot or moving components.
- Intermittent P0913 can be caused by a poor ground connection at the transmission or chassis, which raises reference voltage and confuses the TCM.
- Some vehicles require a transmission fluid level check and adaptation reset after actuator replacement, or the code may return immediately.
- The gate select actuator is sometimes integrated into the transmission mechatronic unit, making replacement a costly repair that should be confirmed with thorough electrical testing.
- A weak battery or charging system fault can cause voltage spikes that set this code, so check battery health and grounds before condemning the actuator.

Can I keep driving with P0913?

If the vehicle is in limp mode or refuses to shift, do not continue driving because it can be unsafe and may cause further transmission damage. Have the vehicle towed to a qualified repair shop for diagnosis.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter
- Oscilloscope
- Wiring diagram and service information
- Socket and wrench set
- Transmission jack or support stand



Reading P0913

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 9** Transmission.
- 13** The exact fault within that area.

Often seen with

P0700 Transmission Control System Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P0912** Gate Select Actuator Circuit Low · **P0914** Gear Shift Position Circuit · **P0915** Gear Shift Position Circuit Range/Performance

See it working

Watch the animated explainer [How Coil-on-Plug Ignition Works: Coil and Spark Plug](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0913/>

