

GENERIC · POWERTRAIN

P077C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P077C

Output Shaft Speed Sensor Circuit Low

P077C means the transmission control module (TCM) has detected an abnormally low voltage signal from the output shaft speed sensor circuit, which typically indicates a short to ground, a faulty sensor, or damaged wiring. The TCM uses this sensor to measure transmission output speed for shift scheduling and torque converter clutch control, so a low signal can disrupt those functions.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Transmission

Symptoms you may notice

- Illumination of the check engine light or transmission warning light, often with no other noticeable symptoms
- Harsh or delayed gear shifts, or the transmission entering limp mode
- Incorrect or erratic speedometer readings on vehicles that derive vehicle speed from the output shaft sensor
- Transmission slipping or failing to engage certain gears
- Reduced fuel economy due to improper shift points
- In some cases, the vehicle may start off in a higher gear or refuse to downshift

Common causes, most likely first

- 1 Faulty output shaft speed sensor (internal short or open circuit)
- 2 Damaged or corroded wiring harness between the sensor and the TCM, including chafed insulation or broken wires
- 3 Loose, dirty, or corroded electrical connector at the sensor or TCM
- 4 Metal debris or metallic particles stuck to the sensor tip, interfering with the signal
- 5 Failed TCM or internal transmission fault causing a low reference voltage
- 6 Poor ground connection for the sensor circuit
- 7 Aftermarket or incorrect sensor installed previously



How to diagnose and fix it

- 1 Use an OBD-II scanner to confirm P077C is the only or primary code and check for related transmission codes
- 2 Visually inspect the output shaft speed sensor, its connector, and the wiring harness for damage, corrosion, or loose pins
- 3 Measure the sensor's resistance and compare to the manufacturer's specification; replace if out of range
- 4 Check for a short to ground or open circuit in the signal wire between the sensor and TCM using a multimeter
- 5 Clean the sensor tip of any metallic debris and reinstall, then clear the code and test-drive
- 6 If the wiring and sensor test good, verify the TCM ground and power supply, and consider TCM software update or replacement
- 7 Perform a transmission fluid service if the fluid is contaminated, as debris can affect sensor operation

Output shaft sensor low voltage traps

- A low voltage code often results from a short to ground in the signal wire, which can be caused by a pinched harness near the transmission mount or exhaust heat shield.
Metallic debris on the sensor tip is a common cause that many technicians overlook; always clean the sensor before condemning it.
- On some vehicles, the output shaft speed sensor is also used for the speedometer, so a low signal may cause erratic speed readings that owners misattribute to the instrument cluster.
- A weak or failing transmission control module ground can produce a low voltage code without any sensor fault, so check grounds before replacing parts.
Aftermarket sensors with incorrect resistance values are a frequent source of repeat P077C codes; always use an OEM-quality replacement.

Can I keep driving with P077C?

You can usually drive the vehicle with P077C, but expect harsh shifts or limp mode, and avoid heavy acceleration or towing until the fault is repaired. Prolonged driving with a faulty output shaft signal can lead to transmission damage, so schedule diagnosis soon.

Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Jack and jack stands or ramps
- Basic socket and wrench set
- Electrical contact cleaner
- Manufacturer service information for wiring diagrams and resistance specs



Reading P077C

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 7** Transmission.
- 7C** The exact fault within that area.

Often seen with

P0715 Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction · **P0721** Output Speed Sensor Range/Performance · **P0722** Output Speed Sensor Circuit No Signal · **P077D** Output Shaft Speed Sensor Circuit High

See it working

Watch the animated explainer [How a Padlock Works: Pin Tumbler Lock in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p077c/>

