

GENERIC · POWERTRAIN

P0791

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0791

Intermediate Shaft Speed Sensor 'A' Circuit

P0791 indicates that the transmission control module (TCM) has detected an abnormal signal from the intermediate shaft speed sensor 'A' circuit. The TCM uses this sensor to monitor the speed of the intermediate shaft inside the transmission, and when the signal is missing, erratic, or out of range, it sets this code and may illuminate the check engine light.

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

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp).
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Harsh or delayed transmission shifts due to incorrect speed data.
- Transmission may enter limp mode, limiting vehicle speed and gear selection.
- Erratic or inconsistent speedometer readings (if the sensor signal is used for the speedometer).
- Reduced fuel economy or poor performance because the TCM cannot optimize shift points.

Common causes, most likely first

- 1 Faulty intermediate shaft speed sensor 'A'.
- 2 Damaged or corroded wiring or connector at the sensor.
- 3 Open or short circuit in the sensor signal or ground circuit.
- 4 Debris or metal particles on the sensor tip, disrupting the magnetic signal.
- 5 Internal transmission mechanical issue, such as a damaged reluctor wheel or shaft.
- 6 Faulty transmission control module (TCM) or poor electrical connections to it.

How to diagnose and fix it

- 1 Use an OBD-II scanner to retrieve the code and check for related codes; clear the code and test-drive to see if it returns.
- 2 Visually inspect the sensor and its connector for damage, corrosion, or loose pins; clean or repair as needed.
- 3 Check the sensor's resistance and compare to the manufacturer's specification; replace if out of range.
- 4 Inspect the wiring harness for continuity, shorts to ground, or shorts to power between the sensor and TCM; repair damaged wires.
- 5 Check the sensor tip for metallic debris and clean it; also inspect the reluctor wheel for damage.
- 6 If all electrical checks pass, test the TCM or consult a transmission specialist for further diagnosis.



Common misdiagnosis traps for P0791

- A loose or corroded connector at the intermediate shaft speed sensor is a frequent cause that is often overlooked, so always check the connector before replacing the sensor.
- Metallic debris from transmission wear can accumulate on the sensor tip and cause an intermittent signal; cleaning it may resolve the code without parts replacement.
- The code can be set by a faulty TCM or a poor ground connection, so don't assume the sensor itself is at fault without testing the entire circuit.
- In some vehicles, the intermediate shaft speed sensor is also used for the speedometer, so erratic speedometer readings can accompany this code.
- A low transmission fluid level or contaminated fluid can affect sensor operation indirectly, so check fluid condition as part of the diagnosis.

Can I keep driving with P0791?

If the vehicle drives normally and the only symptom is the check engine light, you can drive cautiously to a repair shop, but avoid heavy acceleration or towing. If the transmission is shifting harshly or has entered limp mode, stop driving and seek professional diagnosis to prevent further damage.

Tools that help

- OBD-II scanner
- Digital multimeter
- Jack and jack stands or ramps
- Socket set
- Wire repair kit
- Manufacturer's service information

Reading P0791

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

Often seen with

P0715 Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction · **P0792** Intermediate Shaft Speed Sensor 'A' Circuit Range/Performance · **P0793** Intermediate Shaft Speed Sensor 'A' Circuit No Signal · **P0794** Intermediate Shaft Speed Sensor 'A' Circuit Intermittent



See it working

Watch the animated explainer [Readiness Monitors and the OBD-II Drive Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0791/>

