

GENERIC · CHASSIS

C05F4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C05F4

Rear Drive Shaft Speed Sensor Circuit Range/Performance

C05F4 indicates that the rear driveshaft speed sensor circuit is reporting a signal that falls outside the expected range or performance criteria, so the control module cannot trust the shaft speed data. The computer compares the sensor signal against other speed inputs and sets this code when the correlation or signal pattern is implausible.

SYSTEM

Chassis

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Brakes, steering and suspension

Symptoms you may notice

- Illumination of the anti-lock brake system (ABS) warning light or traction control light
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Momentary or persistent loss of traction control or stability control assistance
- Erratic or disabled speedometer if the rear shaft signal is used for vehicle speed
- Transmission may shift harshly or hold gears if the module relies on shaft speed for shift logic
- In rare cases, a slight vibration or noise from the rear driveline if the sensor is physically damaged

Common causes, most likely first

- 1 Damaged or corroded rear driveshaft speed sensor wiring harness or connector
- 2 Faulty rear driveshaft speed sensor (internal short, open, or debris on the tip)
- 3 Metal debris or excessive metallic particles on the sensor magnet or tone ring
- 4 Worn or damaged tone ring (reluctor wheel) on the driveshaft
- 5 Poor ground or reference voltage at the sensor circuit
- 6 Failed or failing control module (less common but possible after other causes are ruled out)
- 7 Aftermarket modifications or incorrect tire size affecting speed correlation calculations



How to diagnose and fix it

- 1 Inspect the rear driveshaft speed sensor and its wiring for physical damage, corrosion, or loose connections
- 2 Clean the sensor tip and tone ring of any metallic debris or buildup
- 3 Check the sensor's resistance and output signal with a multimeter or oscilloscope according to the manufacturer's specification
- 4 Verify reference voltage and ground at the sensor connector with the key on
- 5 Inspect the tone ring for missing teeth, cracks, or excessive runout
- 6 Perform a wiggle test on the harness while monitoring live data to catch intermittent faults
- 7 If all else checks out, follow the manufacturer's diagnostic flow for control module testing or replacement

What the rear shaft sensor code hides

- A common oversight is assuming the sensor itself is at fault when the real problem is a damaged tone ring or metallic debris that distorts the signal.
- This code can be set by a mismatch between the rear driveshaft speed and the wheel speed sensors, so a failing wheel speed sensor elsewhere may trigger it indirectly.
- Intermittent faults often stem from chafed wiring near the rear axle or exhaust, which only acts up under vibration or temperature changes.
- After replacing the sensor, some vehicles require a relearn or calibration procedure; skipping it can leave the code stored or cause poor shift quality.
- Lifted vehicles or those with altered driveline angles may produce a plausible but out-of-range signal that sets this code without any failed component.

Can I keep driving with C05F4?

The vehicle is generally safe to drive if the only symptom is a warning light, but avoid towing or aggressive driving because traction control and ABS may be compromised. If the transmission shifts erratically or the speedometer drops out, have it diagnosed promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oscilloscope (for signal waveform analysis)
- Socket and ratchet set
- Wire brush or contact cleaner
- Manufacturer-specific diagnostic software (if available)



Reading C05F4

- C** Chassis: brakes, steering and suspension.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Brakes, steering and suspension.
- F4** The exact fault within that area.

Often seen with

C0035 Left Front Wheel Speed Sensor Circuit Range/Performance · **C0040** Left Rear Wheel Speed Sensor Circuit · **C0050** Right Rear Wheel Speed Sensor Circuit Malfunction · **P0500** Vehicle Speed Sensor Malfunction · **U0121** Lost Communication With Anti-Lock Brake System (ABS) Control

See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c05f4/>

