

GENERIC · CHASSIS

C05F3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

## C05F3

### Rear Drive Shaft Speed Sensor Circuit

C05F3 indicates the rear drive shaft speed sensor circuit has a fault, meaning the control module is not receiving a valid signal from the sensor that monitors the rotational speed of the rear driveshaft. The computer detects an abnormal voltage, missing pulses, or an implausible signal compared to other speed sensors, and it sets this code to alert the driver.

| SYSTEM  | CODE TYPE           | SEVERITY | FIX DIFFICULTY | AREA                            |
|---------|---------------------|----------|----------------|---------------------------------|
| Chassis | Generic (all makes) | Medium   | Intermediate   | Brakes, steering and suspension |

### Symptoms you may notice

- Anti-lock braking system (ABS) warning light or traction control light illuminated on the dashboard
- Speedometer may read erratically or stop working entirely
- Transmission may shift harshly or fail to shift properly due to incorrect speed data
- Cruise control may be disabled or function intermittently
- Often no symptoms besides the warning light, especially if the fault is intermittent

### Common causes, most likely first

- Damaged or corroded wiring harness or connector at the rear drive shaft speed sensor
- Faulty rear drive shaft speed sensor itself
- Debris or metallic particles stuck to the sensor tip, disrupting the signal
- Damaged or missing teeth on the tone ring (reluctor wheel) on the driveshaft
- Water intrusion or corrosion inside the sensor connector
- Loose or improperly seated sensor mounting
- Internal failure in the control module (rare)

### How to diagnose and fix it

- Inspect the sensor and its wiring for visible damage, corrosion, or loose connections; clean and secure as needed
- Check the sensor's resistance and output signal with a multimeter or oscilloscope to verify proper operation
- Remove the sensor and inspect the tip for metallic debris; clean it and reinstall
- Inspect the tone ring on the driveshaft for missing teeth, cracks, or debris; replace if damaged
- Perform a voltage drop test on the sensor circuit to rule out high resistance in the wiring
- Replace the rear drive shaft speed sensor if it fails electrical testing
- Clear the code and test-drive the vehicle to confirm the repair and ensure the code does not return



## What a driveshaft speed sensor code really means

- A common misdiagnosis is replacing the sensor when the real problem is a damaged tone ring or corroded connector, so always inspect the entire circuit first.
- Intermittent faults often occur due to vibration or temperature changes, so wiggle-test the harness while monitoring live data to catch the issue.
- The rear drive shaft speed sensor is sometimes shared with the vehicle speed sensor function, so a fault can affect the speedometer and transmission shifting even if the ABS light is the only warning.
- Metallic debris from a failing bearing or differential can accumulate on the sensor tip and cause a false signal, so cleaning it may temporarily fix the code but the underlying mechanical issue must be addressed.
- This code can be set by a weak battery or charging system issue that causes low voltage to the control module, so always check battery health and grounds before condemning the sensor.

## Can I keep driving with C05F3?

If the warning light is on but the vehicle drives normally, you can drive cautiously to a repair shop, but avoid heavy acceleration or towing. If the speedometer is erratic or the transmission shifts poorly, limit driving and have the vehicle inspected promptly to prevent further damage.

## Tools that help

- OBD-II scanner
- Digital multimeter
- Oscilloscope (optional for signal analysis)
- Socket and ratchet set
- Wire brush or contact cleaner
- Jack and jack stands or ramps

## Reading C05F3

|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| <b>C</b>  | Chassis: brakes, steering and suspension.                            |
| <b>0</b>  | Generic (SAE) code: it means the same thing on every OBD-II vehicle. |
| <b>5</b>  | Brakes, steering and suspension.                                     |
| <b>F3</b> | The exact fault within that area.                                    |

## Often seen with

**C0035** Left Front Wheel Speed Sensor Circuit Range/Performance · **C05F2** Rear Drive Shaft Speed Sensor Circuit Intermittent · **C05F4** Rear Drive Shaft Speed Sensor Circuit Range/Performance · **P0500** Vehicle Speed Sensor Malfunction · **P0720** Output Speed Sensor Circuit Malfunction



### See it working

Watch the animated explainer [How an Automatic Transmission Works, Gear by Gear](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c05f3/>

