

GENERIC · BODY

B0140

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

B0140

Passenger Seatbelt Tension Sensor Circuit

B0140 indicates that the body control module or occupant classification system has detected an out-of-range signal from the passenger seatbelt tension sensor circuit. The sensor measures the force applied to the seatbelt webbing, and the computer compares that voltage to an expected range to determine if the passenger airbag should be enabled or suppressed.

SYSTEM

Body

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Airbags, seats, doors, lights and comfort systems

Symptoms you may notice

- Supplemental restraint system (SRS) warning light illuminated on the dashboard
- Passenger airbag status indicator may show 'off' even when a passenger is seated
- Often no symptoms besides the warning light, with normal seatbelt operation
- In some vehicles, the passenger airbag may be automatically disabled as a fail-safe
- Intermittent warning light that comes and goes over bumps or when adjusting the seat

Common causes, most likely first

- 1 Faulty passenger seatbelt tension sensor or its internal circuitry
- 2 Damaged or chafed wiring harness under the passenger seat or along the seat track
- 3 Corroded or loose electrical connector at the tension sensor or body control module
- 4 Failed occupant classification system (OCS) module or weight sensor calibration
- 5 Seatbelt buckle pretensioner or retractor mechanism binding, causing abnormal tension readings
- 6 Water intrusion or debris in the connector causing signal interference

How to diagnose and fix it

- 1 Inspect the passenger seatbelt tension sensor connector and wiring for damage, corrosion, or loose pins
- 2 Check for technical service bulletins (TSBs) or recalls related to the seatbelt tension sensor or occupant classification system for the specific vehicle
- 3 Measure the sensor's resistance or voltage output with a multimeter and compare to factory specifications
- 4 Perform a zero-point calibration or relearn procedure for the occupant classification system using a scan tool
- 5 Replace the passenger seatbelt tension sensor or seatbelt assembly if readings are out of range
- 6 Repair or replace damaged wiring harness sections and clear the code
- 7 Verify the repair by clearing codes and confirming the SRS light stays off through several drive cycles

What Most Techs Overlook on B0140

- A weak or failing battery can cause spurious SRS codes, so always check battery voltage and charging system before condemning the sensor.
- The tension sensor is often integrated into the seatbelt buckle or retractor assembly, meaning the entire unit may need replacement rather than just the sensor.
- After any repair, the occupant classification system may require a calibration procedure that many DIYers skip, leading to a recurring code.
- Seat-mounted side airbag wiring and tension sensor wiring often share the same harness, so damage from seat movement can affect both systems.
- The code can set intermittently due to a loose connector that only loses contact when the passenger seat is adjusted or the vehicle hits a bump.

Can I keep driving with B0140?

The vehicle remains drivable, but the passenger airbag may be disabled, reducing protection in a crash. Avoid carrying a passenger in the front seat until the fault is repaired, and have the system diagnosed promptly.

Tools that help

- OBD-II scan tool with SRS/body control module capability
- Digital multimeter
- Wire terminal pick and electrical contact cleaner
- Factory service information or wiring diagrams
- Torque wrench for seat and seatbelt fasteners

Reading B0140

- B** Body: airbags, seats, doors, lights and comfort systems.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 1** Airbags, seats, doors, lights and comfort systems.
- 40** The exact fault within that area.

See it working

Watch the animated explainer [V6 Engine Explained: 60° Bank and Firing Order](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/b0140/>

