



P07EE

Transmission Range Multi-Function Select Circuit Range/Performance

P07EE indicates that the transmission control module (TCM) has detected an out-of-range or performance fault in the multi-function select circuit, which is the electrical path that tells the computer which gear range the driver has selected. The TCM compares the voltage or signal from the range selector against expected values and sets this code when the signal falls outside the valid window or does not change as expected.

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

Symptoms you may notice

- The gear position indicator on the dashboard may flash or show the wrong range.
- The transmission may refuse to shift out of park or may engage the wrong gear when selected.
- The vehicle may enter limp mode, limiting speed and gear selection.
- The check engine light or transmission warning light illuminates.
- Starting may be inhibited because the TCM cannot confirm park or neutral.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 A faulty transmission range sensor or multi-function switch (also called neutral safety switch) that sends incorrect signals.
- 2 Damaged, corroded, or loose wiring or connectors in the circuit between the switch and the TCM.
- 3 Water intrusion or contamination inside the range sensor connector or switch housing.
- 4 A misadjusted or mechanically binding selector cable or linkage that prevents the switch from reaching the correct position.
- 5 An internal fault in the TCM or its processing of the range signal.
- 6 A low or weak battery causing voltage spikes or drops that affect sensor signals.



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P07EE is the only range-related code and to see the conditions when it set.
- 2 Inspect the range sensor connector and wiring for corrosion, water intrusion, or loose pins, and repair as needed.
- 3 Check the selector cable or linkage adjustment and verify the switch aligns with each detent; adjust or replace binding components.
- 4 Back-probe the range sensor connector and compare voltages or resistance values in each gear against the manufacturer's specification.
- 5 If the sensor is faulty, replace the transmission range sensor or multi-function switch and clear the code.
- 6 Perform a relearn or calibration procedure if required by the manufacturer after sensor replacement.
- 7 Clear codes and road test through all gear ranges to confirm the fault does not return.

Range sensor faults often mimic other problems

- A misadjusted selector cable can set P07EE even when the range sensor itself is perfectly functional, so always check linkage alignment before replacing parts.
- Intermittent P07EE codes are frequently caused by water intrusion into the range sensor connector, especially on vehicles that have been driven through deep water or have clogged sunroof drains.
- Some vehicles use a multi-function switch that also controls reverse lights and starting inhibition, so a failure there can cause multiple unrelated symptoms that lead technicians astray.
- A weak battery or poor ground connection can cause voltage fluctuations that the TCM interprets as a range signal error, so always verify battery and ground integrity first.
- The code can be stored by a TCM that has lost communication with the range sensor due to a CAN bus fault, so check for other communication codes before condemning the sensor.

Can I keep driving with P07EE?

If the vehicle drives and shifts normally, you can drive cautiously to a repair shop, but avoid relying on the gear indicator and be prepared for limp mode. If the transmission will not engage a gear or the vehicle will not start, do not drive and have it towed.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter
- Manufacturer service information for circuit specifications
- Basic hand tools for connector and linkage inspection
- Jack and jack stands or ramps for under-vehicle access



Reading P07EE

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

Often seen with

P0705 Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P0707** Transmission Range Sensor Circuit Low · **P0708** Transmission Range Sensor Circuit High · **P0850** Park/Neutral Switch Input Circuit

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/p07ee/>

