

GENERIC · POWERTRAIN

P07F5

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P07F5

Transmission Range Control Module System Voltage Low

P07F5 indicates that the Transmission Range Control Module (TRCM) has detected a low system voltage condition, typically below a calibrated threshold such as 9 volts. The module monitors its power supply and sets this code when the voltage drops low enough to risk unreliable operation of the range control functions.

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

Symptoms you may notice

- Illumination of the check engine light or transmission warning light
- Transmission may fail to engage the selected range or may default to a limp mode
- Erratic or delayed shifting, or the gear indicator may flash or show incorrect range
- The vehicle may not start if the range module cannot recognize Park or Neutral
- Often no symptoms besides the warning light, especially if the voltage drop was brief

Common causes, most likely first

- 1 Weak or failing vehicle battery, especially during cold starts or under load
- 2 Corroded, loose, or damaged battery terminals and ground connections
- 3 Faulty charging system (alternator) not maintaining proper voltage
- 4 Damaged or chafed wiring in the TRCM power supply circuit
- 5 Blown fuse or poor connection at the fuse box feeding the TRCM
- 6 Internal fault in the Transmission Range Control Module causing excessive current draw or voltage sensing error



How to diagnose and fix it

- 1 Perform a battery load test and charging system check to rule out low voltage from the battery or alternator
- 2 Inspect and clean battery terminals, ground straps, and the TRCM ground connection for corrosion or looseness
- 3 Check the fuse and relay supplying power to the TRCM, and verify voltage at the module connector with the key on
- 4 Inspect the wiring harness from the TRCM to the power source for chafing, pinch points, or moisture intrusion
- 5 Using a scan tool, monitor TRCM voltage PID during a test drive to see if the low voltage is intermittent or constant
- 6 If voltage supply and grounds are good, test the TRCM by back-probing the connector and checking for internal shorts or excessive draw
- 7 Replace the TRCM only after confirming all power and ground circuits are intact and the module is the source of the low voltage signal

Low voltage does not always mean a bad module

- A marginal battery that still starts the engine can drop below the TRCM threshold during cranking, setting this code without any driveability complaint.
- Corroded ground connections on the transmission or chassis are a frequent culprit, especially in vehicles exposed to road salt or moisture.
- The TRCM may share a power circuit with other modules, so a fault in a related system can pull the voltage down and trigger P07F5 indirectly.
- Technicians sometimes replace the TRCM prematurely when the real issue is a chafed wire that only shorts when the harness is flexed or the vehicle hits a bump.
- After repairing the low voltage cause, the code may remain stored until several clean drive cycles complete, so do not assume the fix failed if the light stays on briefly.

Can I keep driving with P07F5?

If the vehicle drives normally and the warning light is steady, you can drive cautiously to a repair shop, but avoid long trips or heavy electrical loads. If the transmission behaves erratically or fails to engage a gear, stop driving and have the vehicle towed to prevent damage or a safety hazard.

Tools that help

- Digital multimeter
- Battery load tester
- OBD-II scan tool with live data capability
- Fuse puller and test light
- Wire probe and electrical contact cleaner



Reading P07F5

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
7	Transmission.
F5	The exact fault within that area.

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0700** Transmission Control System Malfunction · **P07F4** Transmission Range Control Module Communication Circuit High · **P07F6** Gear 9 Incorrect Ratio

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/p07f5/>

