

GENERIC · POWERTRAIN

P0950

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0950

Auto Shift Manual Control Circuit

P0950 indicates that the transmission control module (TCM) has detected a fault in the electrical circuit for the auto shift manual control, which is the system that allows the driver to manually select gears in an automatic transmission with a manual shift mode. The TCM monitors the circuit for expected voltage or resistance and sets this code when the signal is out of range, indicating an open, short, or component failure.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- The manual shift mode may not engage when selected, leaving the transmission in fully automatic mode.
- The gear position indicator may flash or show an incorrect gear when manual mode is requested.
- The transmission may default to a limp-home mode, limiting gear selection or holding a single gear.
- The check engine light or transmission warning light illuminates on the dashboard.
- Buttons or paddles on the steering wheel or shifter may become unresponsive.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 Faulty auto shift manual control switch or button assembly, such as a worn contact or stuck button.
- 2 Damaged or corroded wiring harness or connector at the shifter assembly or transmission.
- 3 Open or short circuit in the signal wire between the control switch and the TCM.
- 4 Failed transmission control module (TCM) or body control module (BCM) that processes the manual shift signal.
- 5 Poor ground connection for the manual shift control circuit.
- 6 Aftermarket accessories or improper wiring repairs interfering with the circuit.
- 7 Internal transmission fault, such as a failed manual valve or sensor, though less common for this specific code.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in the transmission and body control modules.
- 2 Inspect the manual shift control switch and buttons for physical damage, sticking, or contamination, and test their operation with a multimeter.
- 3 Check the wiring harness and connectors between the shifter assembly and the TCM for chafing, corrosion, or loose pins.
- 4 Perform a voltage drop or resistance test on the signal circuit to confirm an open or short.
- 5 Test the ground circuit for the manual shift control system to ensure a clean, tight connection.
- 6 If the circuit and switch test good, substitute a known-good TCM or reflash the module as per manufacturer procedures.
- 7 Clear the code and perform a road test in manual mode to confirm the repair and ensure the code does not return.

Before replacing the transmission control module

- A common oversight is assuming the TCM is at fault when the actual problem is a worn manual shift switch or a chafed wire in the steering column or shifter boot area.
- In some vehicles, the auto shift manual control circuit is integrated into the clock spring or steering column module, so a faulty clock spring can set P0950 even if the paddles themselves test good.
- Intermittent P0950 codes often occur due to loose connectors or corrosion at the transmission pass-through connector, which can be missed during a quick visual inspection.
- The code can be set by a low battery or charging system issue that causes voltage spikes, so always check battery health and grounds before condemning components.
- Aftermarket remote starters or alarm systems that tap into the shifter wiring can introduce resistance or interference that triggers this code.

Can I keep driving with P0950?

The vehicle is generally safe to drive in automatic mode, but manual shift functionality may be unavailable and the transmission could enter limp mode. Avoid aggressive driving or towing until the fault is repaired, and have the system diagnosed promptly to prevent further damage.

Tools that help

- OBD-II scan tool with transmission module capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Trim removal tools
- Contact cleaner and dielectric grease



Reading P0950

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

Often seen with

P0700 Transmission Control System Malfunction · **P0705** Transmission Range Sensor Circuit Malfunction · **P0951** Auto Shift Manual Control Circuit Range/Performance · **P0952** Auto Shift Manual Control Circuit Low · **P0953** Auto Shift Manual Control Circuit High

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/p0950/>

