



P1700 · Suzuki

TCM Throttle Position Sensor Circuit Fault

P1700 on a Suzuki means the Transmission Control Module (TCM) has detected an electrical fault in the throttle position signal circuit it monitors. The TCM compares the throttle position sensor (TPS) voltage against expected values and sets this code when the signal is out of range, intermittent, or missing entirely. This affects shift quality because the TCM uses throttle position to decide shift points and line pressure.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Suzuki specific	Medium	Intermediate	Transmission

Symptoms you may notice

- The check engine light or transmission warning light illuminates on the dashboard.
- Harsh or delayed automatic gear shifts, especially when accelerating from a stop.
- The transmission may stay in a single gear or enter limp-home mode.
- Poor fuel economy or a noticeable lack of power during acceleration.
- Often no symptoms besides the warning light, particularly if the fault is intermittent.

Common causes, most likely first

- 1 Worn or dirty throttle position sensor causing an erratic voltage signal.
- 2 Damaged wiring or corroded connectors between the TPS and the TCM.
- 3 A faulty TCM that misreads a valid throttle position signal.
- 4 Poor ground connection at the TPS or TCM mounting points.
- 5 Aftermarket or incorrectly adjusted TPS installed during previous repairs.
- 6 Intake or throttle body modifications that alter the TPS mounting angle.

How to diagnose and fix it

- 1 Connect a scan tool and record the TPS voltage and TCM live data to confirm the fault is present.
- 2 Visually inspect the TPS connector and wiring harness for corrosion, chafing, or loose pins.
- 3 Back-probe the TPS signal wire at the TCM and compare voltage with the scan tool reading.
- 4 Check the TPS ground circuit for excessive resistance using a multimeter.
- 5 Test the TPS with a multimeter for smooth resistance change through the full throttle range.
- 6 If the sensor is faulty, replace the TPS and perform a throttle position relearn procedure.
- 7 Clear the code and road test the vehicle through several drive cycles to confirm the repair.



Why P1700 is often a wiring fault

- A common misdiagnosis is replacing the TCM when the real problem is a chafed signal wire near the throttle body or a corroded connector pin.
- The TPS signal is shared with the engine control module on many Suzuki models, so an engine-side fault can set P1700 without any transmission problem.
- Intermittent P1700 codes often appear only during cold starts or after driving over rough roads, which points to a loose connection rather than a failed sensor.
- A dirty throttle body can cause the TPS to report a slightly out-of-range voltage at closed throttle, triggering P1700 without a hard sensor failure.
- After replacing a TPS, failing to perform the throttle position relearn procedure can cause the code to return immediately.

Can I keep driving with P1700?

You can usually drive the vehicle to a workshop, but avoid heavy acceleration and towing because the transmission may shift harshly or enter limp mode. If the transmission is stuck in one gear, limit driving to a short distance at low speed.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire piercing probes or back-probe kit
- Socket set and Torx bits for throttle body removal
- Electrical contact cleaner

Reading P1700

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Suzuki): its meaning depends on the make.
7	Transmission.
00	The exact fault within that area.

Often seen with

P0120 Throttle Position Sensor A Circuit Malfunction · **P0121** Throttle Position Sensor A Circuit Range/Performance · **P0122** Throttle Position Sensor A Circuit Low Input · **P0123** Throttle Position Sensor A Circuit High Input · **P0700** Transmission Control System Malfunction



See it working

Watch the animated explainer [How a Manual Transmission Works: Four-Speed Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/suzuki-p1700/>

