

HONDA · POWERTRAIN

P1705

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1705 · Honda

TCM A/T Gear Position Switch Circuit Shorted

P1705 on Honda vehicles means the Transmission Control Module (TCM) has detected a short circuit in the automatic transmission gear position switch circuit, which is the sensor that tells the computer which gear the shift lever is in. The TCM monitors the voltage on the switch signal wire and sets this code when the signal stays outside the expected range for the current gear, indicating a short to ground or to power rather than a normal open or closed switch state.

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

Symptoms you may notice

- The Check Engine Light or Transmission Control Module (TCM) warning light illuminates on the dashboard.
- The gear indicator on the instrument cluster may show the wrong gear or flash erratically.
- The transmission may shift harshly, stay in a single gear, or refuse to engage certain gears.
- The engine may start only in Neutral instead of Park, or the reverse lights may not work.
- Often no symptoms besides the warning light, especially if the short is intermittent.
- The vehicle may enter limp mode with reduced power and limited gear selection.

Common causes, most likely first

- 1 A damaged or internally shorted automatic transmission gear position switch, often due to fluid contamination or wear.
- 2 A chafed or pinched wire in the gear position switch circuit shorting to ground or to battery voltage.
- 3 Corroded or loose electrical connectors at the switch or at the TCM, allowing voltage to bleed across pins.
- 4 A faulty TCM internal driver circuit that incorrectly reports a short.
- 5 Aftermarket accessories or alarm wiring tapped into the switch circuit and causing a short.
- 6 Moisture intrusion into the switch connector or harness, creating a conductive path between pins.



How to diagnose and fix it

- 1 Connect a scan tool and record all stored and pending codes, then clear P1705 and test-drive to see if it returns immediately or only under specific conditions.
- 2 Inspect the gear position switch connector and the TCM connector for corrosion, loose pins, or signs of fluid intrusion, and clean or repair as needed.
- 3 Disconnect the switch and measure resistance across its terminals in each gear position, comparing to Honda specifications to confirm the switch is not internally shorted.
- 4 With the switch disconnected, check the signal wire from the switch to the TCM for continuity to ground and to power with the key on, looking for a short that would set P1705.
- 5 Wiggle-test the harness while watching live gear position data on the scan tool to catch intermittent shorts that only appear when the wiring is moved.
- 6 If the circuit and switch test good, substitute a known-good TCM or perform a TCM software update if Honda has issued one for this fault.
- 7 After repair, clear codes, verify correct gear position data in all lever positions, and road-test through all gears to confirm the code does not reset.

What Honda techs check before replacing the switch

- A shorted gear position switch is often caused by transmission fluid wicking through the switch connector, so always check for fluid residue before condemning the switch itself.
- The TCM on many Hondas shares a ground with other sensors, and a bad ground can make the switch circuit appear shorted even when the switch and wiring are fine.
- Aftermarket remote starters and alarm systems frequently tap into the gear position circuit, and a poor splice there is a common hidden cause of P1705.
- P1705 can be set by a momentary short during heavy rain or car washing if the connector seal is compromised, so an intermittent code may not mean a hard failure.
- Do not replace the TCM based on P1705 alone; verify the switch and wiring first because a shorted switch is far more common than a failed TCM.

Can I keep driving with P1705?

You can usually drive the vehicle to a repair shop, but avoid highways and heavy traffic because the transmission may shift unpredictably or enter limp mode. If the car will not start in Park or the reverse lights are out, have it towed rather than risk a no-start or safety issue.



Tools that help

- OBD-II scan tool with live transmission data
- Digital multimeter
- Honda service information for switch resistance specifications
- Wire terminal pick and contact cleaner
- Jack and jack stands or ramps for under-vehicle access

Reading P1705

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

Often seen with

P1706 Park Neutral Position PNP Switch · **P1706** High Vehicle Speed Observed In Park · **P1706** TCM A/T Gear Position Switch Circuit Open · **P1706** High Vehicle Speed Observed in Park · **P0705** Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction

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/honda-p1705/>

