

MAZDA · POWERTRAIN

# P1799

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

## P1799 · Mazda

### Hold Switch Circuit

P1799 on Mazda vehicles indicates that the transmission control module (TCM) has detected an abnormal condition in the hold switch circuit, which is part of the automatic transmission's manual shift control system. The TCM monitors the voltage or signal from the hold switch and sets this code when the signal is outside the expected range, often due to an open or short circuit. This fault can prevent the hold function from engaging, affecting the transmission's ability to hold a gear for improved traction or engine braking.

| SYSTEM     | CODE TYPE      | SEVERITY | FIX DIFFICULTY | AREA         |
|------------|----------------|----------|----------------|--------------|
| Powertrain | Mazda specific | Medium   | Intermediate   | Transmission |

### Symptoms you may notice

- The hold indicator light may flash or fail to illuminate when the hold button is pressed.
- The transmission may not hold gears as expected, leading to unexpected upshifts or downshifts.
- The vehicle may default to a limp mode, limiting gear selection or engine performance.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Harsh or delayed shifting may occur as the TCM struggles to determine the driver's intent.
- The hold function may be completely inoperative, with no response when the button is pressed.

### Common causes, most likely first

- Faulty hold switch itself, worn out or damaged from repeated use.
- Open or short circuit in the wiring harness between the hold switch and the TCM.
- Corroded or loose electrical connectors at the hold switch or TCM.
- Blown fuse or poor ground connection affecting the hold switch circuit.
- Internal failure in the TCM, though less common.
- Damage to the switch from liquid spills or physical impact.



## How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in the transmission control system.
- 2 Inspect the hold switch for physical damage, sticking, or contamination, and test its continuity with a multimeter.
- 3 Check the wiring harness and connectors between the hold switch and TCM for signs of chafing, corrosion, or loose pins.
- 4 Test the hold switch circuit for proper voltage and ground signals according to the Mazda service information.
- 5 If the switch and wiring are good, test the TCM inputs and outputs; replace the TCM if internal failure is confirmed.
- 6 Clear the code and perform a road test to verify the repair and ensure the hold function operates correctly.

## Common Misdiagnosis Traps for P1799

- A faulty brake light switch or related circuit can sometimes cause similar symptoms because the TCM uses brake input to manage hold functionality, so check for stored brake switch codes.
- The hold switch is often part of a combined switch assembly with other functions, and replacing just the hold button may not solve the issue if the entire assembly is faulty.
- Intermittent P1799 codes can be caused by a poor ground connection at the transmission range sensor or TCM, which is often overlooked during diagnosis.
- Some Mazda models use a hold switch that is integrated into the shift lever, and wear in the lever mechanism can cause false signals without a defective switch.
- After replacing the TCM, programming or relearning may be required, and failing to do so can lead to persistent or new codes.

## Can I keep driving with P1799?

You can generally continue driving with P1799, but the hold function may be unavailable and the transmission might not hold gears as intended, which could affect traction in slippery conditions. Avoid relying on the hold feature and drive conservatively until the fault is repaired, especially if the transmission exhibits harsh shifting or enters limp mode.

## Tools that help

- OBD-II scan tool with Mazda-specific software
- Digital multimeter
- Test light
- Wiring diagram for the specific Mazda model
- Socket set and trim removal tools



## Reading P1799

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

## Often seen with

**P1797** Vehicle Speed Signal Short To B+ · **P1797** P/N Switch Open Or Short Circuit · **P1797** P/N Switch Open Or Short Circuit · **P1797** Clutch Pedal Switch MT Or P/N Switch Circuit Fault · **P1797** CAN TCM ECM Circuit Malfunction · **P0700** Transmission Control System Malfunction · **P0705** Transmission Range Sensor Circuit Malfunction · **P0850** Park/Neutral Switch Input Circuit · **U0101** Lost Communication with TCM

## See it working

Watch the animated explainer [How a Catalytic Converter Works: 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/mazda-p1799/>

