

MAZDA · POWERTRAIN

P1756

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1756 · Mazda

Transmission Shift Solenoid B Mechanical Fault

P1756 on a Mazda means the transmission control module (TCM) has detected a mechanical fault in shift solenoid B, which controls fluid pressure for a specific gear change. The TCM commands the solenoid and monitors the resulting hydraulic response, and when the expected pressure change does not occur, it stores this code and usually illuminates the warning light.

SYSTEM

Powertrain

CODE TYPE

Mazda specific

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Transmission

Symptoms you may notice

- Harsh or delayed shifts, especially when the transmission tries to engage the gear controlled by solenoid B
- Transmission may slip or flare during acceleration as the affected gear fails to hold
- The check engine light or transmission warning light is illuminated
- The transmission may enter limp mode, sticking in one gear or refusing to downshift
- Often no symptoms besides the warning light, particularly if the fault is intermittent

Common causes, most likely first

- 1 Worn or sticking shift solenoid B valve inside the valve body
- 2 Contaminated transmission fluid (dirt, clutch material, or sludge) blocking the solenoid screen or valve
- 3 Internal hydraulic leak in the valve body or solenoid B circuit, reducing pressure
- 4 Failed solenoid B coil or damaged electrical connector at the solenoid
- 5 Damaged wiring harness between the TCM and the transmission solenoid pack
- 6 Mechanical wear in the transmission clutch pack or accumulator for the affected gear
- 7 Low transmission fluid level or degraded fluid causing poor hydraulic response

How to diagnose and fix it

- 1 Check transmission fluid level and condition; top off or replace fluid if it is low or visibly contaminated
- 2 Scan all modules for stored and pending codes, and record freeze-frame data to confirm when P1756 sets
- 3 Perform a resistance and voltage test on solenoid B at the transmission connector to rule out an electrical fault
- 4 Inspect the wiring harness and connector pins for corrosion, chafing, or loose terminals
- 5 Remove the transmission pan and inspect for debris; test solenoid B operation with a bidirectional scan tool
- 6 If the solenoid tests good, perform a hydraulic pressure test on the affected circuit to check for internal leaks
- 7 Replace the faulty solenoid or valve body assembly, then clear codes and verify the repair with a road test

What most technicians miss on P1756

- A sticking solenoid B is often caused by degraded fluid rather than a failed solenoid, so skipping a fluid service can lead to repeat failures.
- The TCM may set P1756 intermittently when the transmission is cold, and the solenoid can test fine at room temperature but fail when hot.
- A mechanical fault in the clutch pack for the affected gear can mimic a solenoid B failure, so a pressure test is essential before replacing parts.
- After replacing solenoid B, the TCM may require a relearn or adaptive reset procedure; otherwise the code can return immediately.
- Corroded pins at the transmission connector are a common hidden cause, especially on older Mazdas with exposed harness routing.

Can I keep driving with P1756?

You can usually drive the vehicle to a repair shop, but avoid heavy acceleration and towing because the transmission may slip or fail to shift properly. If the transmission enters limp mode or the warning light flashes, stop driving and have it towed to prevent further damage.

Tools that help

- OBD-II scan tool with bidirectional control and transmission data
- Digital multimeter for resistance and voltage checks
- Transmission fluid level dipstick or scan tool fluid temperature reading
- Hydraulic pressure gauge kit
- Socket set and torque wrench for pan and valve body removal
- Wiring diagram for the transmission solenoid circuit

Reading P1756

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



Often seen with

P1751 Power Supply Voltage High · **P1752** Power Supply Malfunction · **P1753** TCM A/T Lockup Solenoid Valve "A" Fault · **P1751** A/T Control Relay · **P1751** Transmission Shift Solenoid A Mechanical Fault · **P1752** Transmission Shift Solenoid A Circuit Shorted · **P1754** Transmission Coast Clutch Solenoid Electrical Fault · **P1753** TCM A/T ECT Sensor Circuit Fault · **P1751** Shift Solenoid A Performance · **P1754** Coast Clutch Solenoid Circuit Malfunction · **P1751** Secondary Pressure Solenoid Open Circuit · **P0700** Transmission Control System 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/mazda-p1756/>

