

MAZDA · POWERTRAIN

P1764

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1764 · Mazda

Low And Reverse Brake Failsafe Valve Malfunction

P1764 on a Mazda means the transmission control module (TCM) has detected an electrical or hydraulic fault in the failsafe valve that controls the low and reverse brake inside the automatic transmission. The TCM monitors the valve's circuit and the resulting hydraulic pressure, and it sets this code when the signal or pressure does not match what the computer commands.

SYSTEM

Powertrain

CODE TYPE

Mazda specific

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Transmission

Symptoms you may notice

- The check engine light or transmission warning light illuminates on the dashboard.
- Harsh or delayed engagement when shifting into Drive or Reverse.
- The transmission may slip or flare during low-gear acceleration.
- The vehicle may enter limp mode and stay in a single gear.
- A noticeable clunk or jolt when selecting Reverse or a forward gear.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 Faulty low and reverse brake failsafe solenoid valve or its internal coil.
- 2 Damaged, corroded, or shorted wiring in the valve body harness or connector.
- 3 Contaminated transmission fluid clogging the failsafe valve passages.
- 4 Sticking or worn failsafe valve spool inside the valve body.
- 5 Failed transmission control module (TCM) driver circuit for the solenoid.
- 6 Low transmission fluid level or incorrect fluid type causing pressure loss.
- 7 Internal transmission mechanical wear affecting the low and reverse brake circuit.

How to diagnose and fix it

- 1 Check the transmission fluid level and condition; top up or replace fluid if contaminated.
- 2 Inspect the solenoid valve connector and wiring for corrosion, chafing, or loose pins.
- 3 Measure the resistance of the failsafe solenoid and compare it to the Mazda specification.
- 4 Test the solenoid circuit with a bidirectional scan tool to command the valve and observe pressure changes.
- 5 Remove the valve body and clean or replace the failsafe valve and solenoid as needed.
- 6 Clear the code and perform a relearn or adaptation drive cycle to verify the repair.



What Mazda techs check before replacing the valve body

- A low fluid level or a clogged filter often mimics a failed failsafe valve because the low and reverse brake circuit loses pressure first.
- The TCM may set P1764 intermittently from a poor ground connection at the transmission case, which is easy to overlook during a visual inspection.
- Aftermarket transmission fluid that does not meet Mazda's specific specification can cause the failsafe valve to stick and set this code without any hard part failure.
- A failing failsafe valve can sometimes be diagnosed by watching live solenoid current and pressure data on a scan tool while commanding Reverse and Drive engagements.
- Replacing the solenoid without cleaning the valve body often leads to a repeat code because debris remains in the hydraulic circuit.

Can I keep driving with P1764?

You can drive cautiously to a repair shop if the transmission still engages gears and the warning light is steady, but avoid heavy acceleration, towing, or long trips. If the transmission slips, refuses to engage Reverse, or enters limp mode, stop driving and arrange a tow to prevent internal damage.

Tools that help

- OBD-II scan tool with bidirectional control and live transmission data
- Digital multimeter for resistance and voltage checks
- Transmission fluid level dipstick or scan tool fluid temperature reading
- Socket set and torque wrench for valve body removal
- Mazda service information for solenoid resistance specifications and torque sequences

Reading P1764

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

Often seen with

P1761 Shift Lock Short To Ground · **P1762** Shift Lock Short To B+ · **P1763** Shift Lock Open · **P1761** Transmission Shift Solenoid 3 Mechanical Fault · **P1762** Transmission SS3 SS4 OD Band Fault · **P1763** Low And Reverse Brake Pressure Switch Circuit · **P1762** Governor Pressure Sensor Offset Improper Voltage · **P1763** Governor Pressure Sensor Voltage Too High · **P1761** Shift Solenoid C Performance · **P1762** Overdrive Band Failed Off · **P1762** Governor Pressure Sensor Offset Improper Voltage · **P1763** Governor Pressure Sensor Voltage Too High · **P1761** Shift Solenoid Malfunction · **P0750** Shift Solenoid 'A' · **P0755** Shift Solenoid 'B'

See it working

Watch the animated explainer **Four-Stroke Engine Cutaway: Intake to Exhaust** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/mazda-p1764/>

