



P1765 · Mazda

Transmission 3-2 Timing Solenoid Valve

P1765 on Mazda vehicles indicates that the Transmission Control Module (TCM) has detected an electrical or performance fault in the 3-2 timing solenoid valve circuit, which controls the timing of downshifts from third to second gear. The TCM monitors the solenoid's current draw and response time, and it sets this code when the signal is out of expected range or the solenoid fails to actuate as commanded.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Mazda specific	Medium	Professional	Transmission

Symptoms you may notice

- Harsh or delayed downshift when decelerating from third to second gear
- Transmission may slip or hesitate during the 3-2 shift
- Check Engine Light or Transmission Warning Light illuminated
- Limp mode with reduced gear selection or stuck in a single gear
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Faulty 3-2 timing solenoid valve (open or shorted coil)
- 2 Damaged or corroded wiring harness connector at the solenoid
- 3 Transmission fluid contaminated with debris clogging the solenoid screen
- 4 Internal transmission valve body wear causing low hydraulic pressure to the solenoid
- 5 TCM software glitch or internal fault (less common)
- 6 Poor ground connection for the solenoid circuit

How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data to confirm the fault conditions
- 2 Inspect the solenoid connector and wiring for corrosion, chafing, or loose pins; repair as needed
- 3 Check transmission fluid level and condition; service fluid if contaminated
- 4 Measure the resistance of the 3-2 timing solenoid and compare to Mazda specifications; replace if out of range
- 5 Perform a voltage drop test on the solenoid power and ground circuits to rule out wiring resistance
- 6 If electrical checks pass, remove the valve body and inspect the solenoid for debris or mechanical sticking; clean or replace
- 7 After repair, clear codes and perform a relearn drive cycle to verify the 3-2 shift quality and confirm the code does not return



Before you replace the 3-2 solenoid

- A clogged solenoid screen from dirty fluid is a frequent cause that mimics a failed solenoid, so always inspect the screen before condemning the part.
- The TCM may set P1765 intermittently due to a loose ground or chafed wire that only acts up when the engine bay is hot or vibrating.
- A worn valve body can reduce hydraulic pressure to the solenoid, causing a good solenoid to perform poorly and set the code.
- Some Mazda models require a TCM reprogramming after solenoid replacement to restore proper shift adaptives.
- P1765 can be stored without any drivability complaint, so do not assume the transmission is failing based on the code alone.

Can I keep driving with P1765?

You can usually drive the vehicle with P1765, but avoid aggressive acceleration and manual gear selection that forces a 3-2 downshift, as the harsh engagement may worsen transmission wear. If the transmission enters limp mode or shifts erratically, seek service promptly to prevent further damage.

Tools that help

- OBD-II scan tool with Mazda-specific software
- Digital multimeter
- Transmission fluid pressure gauge
- Socket and wrench set
- Fluid drain pan and pump

Reading P1765

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

Often seen with

P1766 Throttle Angle Signal Stuck Off · **P1764** Low And Reverse Brake Failsafe Valve Malfunction · **P1764** Governor Pressure Sensor Voltage Too Low · **P1766** Shift Solenoid D Performance · **P1764** Governor Pressure Sensor Voltage Too Low · **P0700** Transmission Control System Malfunction · **P0732** Gear 2 Incorrect Ratio · **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-p1765/>

