

MAZDA · POWERTRAIN

P1569

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1569 · Mazda

IMRC Circuit Low

P1569 on Mazda vehicles indicates that the powertrain control module (PCM) has detected a low-voltage condition on the intake manifold runner control (IMRC) circuit. The IMRC system uses a solenoid or actuator to adjust intake runner flaps for optimal airflow at different engine speeds, and a low circuit signal typically means the PCM sees voltage below the expected threshold, suggesting a short to ground, a faulty actuator, or a wiring issue.

SYSTEM

Powertrain

CODE TYPE

Mazda specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

**Vehicle speed,
idle control and
auxiliary inputs**

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Slight hesitation or stumble during acceleration, especially at lower engine speeds
- Reduced engine power or sluggish throttle response
- Rough idle or unstable idle quality
- Poor fuel economy in some cases
- In rare instances, a noticeable lack of top-end power

Common causes, most likely first

- 1 Faulty IMRC actuator or solenoid (internal short)
- 2 Damaged or chafed wiring in the IMRC circuit (short to ground)
- 3 Corroded or loose electrical connector at the IMRC actuator
- 4 Failed PCM driver circuit (less common)
- 5 Intake manifold runner flaps mechanically stuck or binding, overloading the circuit
- 6 Aftermarket or incorrect IMRC component installed



How to diagnose and fix it

- 1 Perform a visual inspection of the IMRC actuator and its wiring harness for obvious damage, corrosion, or loose connections
- 2 Use a scan tool to command the IMRC actuator on and off and observe if the actuator responds and if the code returns
- 3 Measure resistance across the IMRC actuator terminals and compare to factory specifications to check for an open or shorted coil
- 4 Backprobe the IMRC circuit at the PCM connector to check for a short to ground with the actuator disconnected
- 5 Check for mechanical binding of the intake manifold runner flaps by manually operating the linkage (if accessible)
- 6 If wiring and actuator test good, substitute a known-good IMRC actuator to see if the code clears
- 7 If all components test good, diagnose the PCM driver circuit or replace the PCM as a last resort

IMRC Circuit Low: Beyond the Actuator

- A low circuit code often results from a short to ground in the wiring harness where it rubs against the engine block or intake manifold, not from a failed actuator.
- Mechanical binding of the intake runner flaps can cause the actuator to draw excessive current, setting a low circuit code even though the actuator itself is fine.
- Some technicians replace the IMRC actuator only to find the connector pins are pushed back or corroded, creating a high resistance that mimics a low circuit.
- The IMRC system may be disabled by the PCM after setting this code, leading to reduced performance that the driver may not immediately associate with the fault.
- On certain Mazda engines, the IMRC actuator is integrated into the intake manifold and cannot be serviced separately, requiring manifold replacement if the actuator fails.

Can I keep driving with P1569?

You can generally continue driving with P1569, but expect reduced engine performance and possibly lower fuel economy. Avoid aggressive acceleration or heavy loads until the fault is repaired, as the IMRC system may be disabled and the engine may not operate at peak efficiency.

Tools that help

- OBD-II scan tool with bidirectional control
- Digital multimeter
- Wire probe set
- Factory service information for circuit specifications
- Basic hand tools (screwdrivers, socket set)



Reading P1569

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Mazda): its meaning depends on the make.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 69** The exact fault within that area.

Often seen with

P1568 Idle Speed Control Throttle Position Mechanical Malfunction · **P1570** Control Unit Locked · **P1570** IMRC Circuit High · **P1568** Speed Control Unable To Hold Speed · **P1568** Cruise Servo Stroke Greater Than Commanded In Cruise · **P1570** Cruise Control System Traction Control Active · **P1568** Speed Control Unable to Hold Speed · **P1568** Cruise Servo Stroke Greater Than Commanded In Cruise · **P1570** Cruise Control System Traction Control Active · **P2004** Intake Manifold Runner Control Stuck Open (Bank 1) · **P2008** Intake Manifold Runner Control Circuit/Open (Bank 1) · **P2011** Intake Manifold Runner Control Circuit/Open (Bank 2)

See it working

Watch the animated explainer [How Airbags Work: A 50 km/h Crash in Slow Motion](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/mazda-p1569/>

