



P1213 · Mazda

Start Injector Circuit

P1213 on Mazda vehicles indicates that the powertrain control module (PCM) has detected an open circuit, short to ground, or short to power in the start injector circuit, which supplies extra fuel during cold starts on certain engine families. The PCM monitors the injector driver and sets this code when the expected current flow or voltage feedback does not match the commanded state during the start injector test.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Mazda specific	Medium	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- Hard starting or extended cranking when the engine is cold, often followed by normal running once warm
- Rough idle or stumbling immediately after a cold start
- Engine may stall shortly after startup in cold weather
- Often no symptoms besides the warning light if the fault is intermittent or only affects the cold-start enrichment phase
- Slight decrease in fuel economy during cold-start periods
- Possible rich or lean exhaust smell during cold start if the injector is stuck open or closed

Common causes, most likely first

- 1 Faulty start injector solenoid with an open or shorted winding
- 2 Damaged or corroded wiring harness between the PCM and the start injector
- 3 Loose, corroded, or disconnected start injector electrical connector
- 4 Failed start injector relay or fuse supplying power to the circuit
- 5 PCM driver circuit failure (rare but possible after water intrusion or voltage spikes)
- 6 Poor engine ground connection affecting injector circuit reference voltage
- 7 Aftermarket alarm or remote start wiring tapped into the start injector circuit



How to diagnose and fix it

- 1 Verify battery voltage and inspect the start injector fuse and relay, replacing any blown fuse or faulty relay
- 2 Disconnect the start injector connector and check for corrosion, tightness, and clean terminals; apply dielectric grease if needed
- 3 Measure resistance across the start injector terminals with a multimeter and compare to the manufacturer's specification
- 4 Backprobe the injector connector with a noid light or oscilloscope while cranking to confirm the PCM is commanding the injector
- 5 Check continuity and resistance of each wire from the PCM connector to the start injector, looking for opens, shorts, or high resistance
- 6 Inspect and clean engine ground points, especially those shared with the injector harness
- 7 If all electrical checks pass, substitute a known-good start injector and retest; replace the PCM only after ruling out all other causes

Cold-start injector faults often hide in plain sight

- A start injector circuit fault can be caused by a failing engine coolant temperature sensor sending a false cold signal, so always check live data for coolant temperature plausibility before condemning the injector.
- Intermittent P1213 codes often appear only during cold mornings or after the vehicle sits overnight, so a simple key-on test may not reveal the fault; a wiggle test of the harness while cranking is more reliable.
- Aftermarket remote start systems frequently splice into the start injector circuit and introduce resistance or intermittent opens that mimic a failed injector.
- The PCM may set P1213 even when the injector itself is good if the driver circuit inside the PCM has degraded, but PCM replacement should be the last step after all wiring and component tests pass.
- A stuck-open start injector can cause a rich condition and set fuel trim codes alongside P1213, so always review freeze-frame data for other pending codes before starting repairs.

Can I keep driving with P1213?

You can usually drive the vehicle if the only symptom is a warning light, but cold-start drivability may be poor and the engine may stall; avoid heavy acceleration or long trips until the fault is repaired, and do not drive if the engine stalls repeatedly or runs very rough.

Tools that help

- Digital multimeter
- Noid light or oscilloscope
- Wire piercing probes or backprobe pins
- Factory service information for wiring diagrams and resistance specifications
- Basic hand tools for connector and component access



Reading P1213

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Mazda): its meaning depends on the make.
- 2** Fuel and air metering (injector circuits).
- 13** The exact fault within that area.

Often seen with

P1211 Intake Valves For Cylinder Shut-Off Open Circuit · **P1211** ABS TCS Control Unit · **P1212** ABS TCS Communication Line · **P1211** Mass Airflow Circuit Intermittent High · **P1212** Mass Airflow Circuit Intermittent Low · **P1211** Injector Control Pressure Sensor Above Below Desired · **P1212** Injector Control Pressure Not Detected During Crank · **P1211** Mass Air Flow Circuit Intermittent High · **P1212** Mass Air Flow Circuit Intermittent Low · **P0172** System Too Rich (Bank 1) · **P0200** Injector Circuit Malfunction · **P0201** Injector Circuit Malfunction - Cylinder 1

See it working

Watch the animated explainer [Excavator Simulator: Hydraulics You Can Operate](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/mazda-p1213/>

