



P1352 · Mazda

Ignition Coil A Primary Circuit

P1352 on Mazda vehicles indicates that the powertrain control module (PCM) has detected an abnormal condition in the primary circuit of ignition coil A, which is the low-voltage side that the PCM uses to trigger the coil. The PCM monitors the current flow and voltage on this circuit and sets the code when the signal does not match expected values during engine operation.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Mazda specific	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms
- Engine misfire or rough running, especially under acceleration or load
- Reduced engine power or hesitation during acceleration
- Poor fuel economy due to incomplete combustion
- Difficulty starting or extended cranking time
- In some cases, the engine may stall or run poorly when cold

Common causes, most likely first

- 1 Faulty ignition coil A (primary winding open or shorted)
- 2 Damaged or corroded wiring or connector at the ignition coil A primary circuit
- 3 Open or shorted primary circuit between the PCM and ignition coil A
- 4 PCM driver circuit failure for ignition coil A
- 5 Poor ground connection for the ignition coil A circuit
- 6 Aftermarket or incorrect ignition coil installed
- 7 Ignition switch or related power supply issue affecting coil primary voltage



How to diagnose and fix it

- 1 Inspect the ignition coil A connector and wiring for corrosion, damage, or loose pins; repair as needed
- 2 Measure the primary resistance of ignition coil A with a multimeter and compare to factory specification; replace coil if out of range
- 3 Check for battery voltage at the coil primary connector with the key on and engine off; verify power and ground circuits
- 4 Perform a wiggle test on the harness while monitoring coil primary signal with a lab scope or scan tool to detect intermittent faults
- 5 Check for continuity and short to ground or power on the primary trigger wire between the PCM and coil; repair harness if faulty
- 6 Swap ignition coil A with a known-good coil from another cylinder (if accessible) and see if the code moves; replace coil if code follows
- 7 If all circuits and coil test good, diagnose the PCM driver circuit or replace the PCM as a last resort

Don't overlook the coil driver circuit

- A common misdiagnosis is replacing the ignition coil when the real fault is a chafed or corroded wire in the primary circuit, especially near the coil connector where heat and vibration take a toll.
- The PCM driver for the coil can fail internally, and this code may set even with a good coil and wiring; always verify the trigger signal with a lab scope before condemning the PCM.
- On some Mazda engines, a failing spark plug or excessive gap can increase primary current and stress the coil, eventually setting P1352; always inspect spark plugs when diagnosing this code.
- Intermittent P1352 codes often appear only under specific conditions such as cold start or high load; a wiggle test and freeze-frame data review are essential to catch these.
- This code is specific to ignition coil A, which on many Mazda engines corresponds to cylinder 1; confirm cylinder numbering and coil location in the service manual before swapping parts.

Can I keep driving with P1352?

You can usually drive the vehicle with P1352 set, but avoid heavy acceleration or sustained high speeds because a misfire can overheat the catalytic converter and cause further damage. If the engine runs very rough or stalls, stop driving and seek repair immediately.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter
- Lab scope (oscilloscope) for signal analysis
- Factory service manual or wiring diagram for the specific Mazda model
- Basic hand tools (socket set, screwdrivers, pliers)
- Test light or noid light for circuit testing



Reading P1352

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Mazda): its meaning depends on the make.
- 3** Ignition system and misfire.
- 52** The exact fault within that area.

Often seen with

P1351 VVT Sensor Range Performance Problem Bank 2 · **P1351** Injection Sensor Circuit · **P1351** Ignition Diagnostic Monitor Signal Lost To PCM Or Out Of Ran · **P1351** Ignition Control Circuit Voltage High · **P1351** Ignition Diagnostic Monitor Circuit Input Fault · **P1351** IC Circuit High Voltage · **P1351** Misfire Cylinder 5 With Fuel Cut-off · **P0300** Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0351** Ignition Coil A Primary/Secondary Circuit Malfunction · **P0352** Ignition Coil B Primary/Secondary Circuit Malfunction

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-p1352/>

