

CHRYSLER · POWERTRAIN

P1113

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1113 · Chrysler

Intake Resonance Switchover Valve Circuit

P1113 on a Chrysler vehicle means the powertrain control module (PCM) has detected a fault in the electrical circuit that controls the intake resonance switchover valve, which is a solenoid that changes the effective length of the intake manifold runners to improve low-end torque and high-rpm airflow. The PCM monitors the valve's control circuit for an open, short to ground, short to power, or excessive current draw, and it sets this code when the commanded state and the feedback do not agree.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- A slight hesitation or flat spot during light-to-moderate acceleration, especially around 2,000–3,000 rpm.
- Reduced engine power or sluggishness at higher engine speeds because the intake runners stay in the long-runner position.
- A faint clicking or buzzing noise from the intake manifold area if the solenoid is stuck or chattering.
- In some cases, a rough idle or unstable idle quality when the valve fails to move to the commanded position.
- Poor fuel economy on some vehicles if the valve remains in the wrong position for the driving conditions.

Common causes, most likely first

- 1 Failed intake resonance switchover valve solenoid (open or shorted coil).
- 2 Damaged, corroded, or disconnected electrical connector at the switchover valve.
- 3 Broken or chafed wiring in the harness between the PCM and the valve, often near the intake manifold or engine mount.
- 4 Vacuum supply leak or disconnected vacuum hose to the switchover valve actuator, if the valve is vacuum-operated.
- 5 Sticking or mechanically binding valve linkage or actuator arm inside the intake manifold.
- 6 PCM driver circuit failure (rare, but possible after a shorted solenoid).
- 7 Aftermarket or incorrect solenoid installed previously that does not match the PCM's expected resistance.



How to diagnose and fix it

- 1 Connect a scan tool and verify P1113 is active or pending, then command the switchover valve on and off while watching for a change in intake note or actuator movement.
- 2 Inspect the electrical connector at the switchover valve for corrosion, pushed-out pins, or a loose latch, and clean or repair as needed.
- 3 Measure the resistance of the switchover valve solenoid with a multimeter and compare it to the manufacturer's specification for your Chrysler engine.
- 4 Check for battery voltage and ground at the valve connector with the key on, using a test light or multimeter, to confirm the circuit is complete.
- 5 Inspect the wiring harness between the PCM and the valve for chafing, pinches, or heat damage, and repair any damaged wires.
- 6 If the valve is vacuum-operated, inspect the vacuum supply hose and actuator for leaks or a disconnected line.
- 7 Replace the intake resonance switchover valve if electrical and vacuum checks pass but the valve does not respond to commands, then clear the code and verify the repair with a road test.

What P1113 does not always mean

- A P1113 is often set by a lazy or sticking valve that still passes a basic resistance check, so a solenoid that clicks does not guarantee it is moving the internal flap.
- Technicians frequently replace the switchover valve only to find the real fault is a chafed wire in the harness near the intake manifold, so always inspect the loom before condemning the part.
- On some Chrysler engines the intake resonance switchover valve shares a fuse or ground with other solenoids, so a blown fuse can set P1113 along with other codes and lead to unnecessary valve replacement.
- A vacuum leak at the switchover valve actuator can mimic a failed solenoid because the PCM sees the valve not reaching its commanded position, even though the electrical circuit is intact.
- The code can be stored intermittently by a connector that only loses contact during engine movement, so a wiggle test of the harness while watching live data is more reliable than a static inspection.

Can I keep driving with P1113?

You can usually continue driving with P1113 because the engine will default to a safe intake runner position and the main risk is reduced performance and fuel economy rather than immediate damage. Avoid heavy acceleration or towing until the fault is repaired, and have the circuit checked soon to prevent a minor wiring issue from becoming a larger repair.



Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Test light
- Vacuum gauge (for vacuum-operated valves)
- Basic hand tools and a wiring diagram for your Chrysler vehicle

Reading P1113

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

Often seen with

P1115 Oxygen Sensor Heater Circuit Short To Ground Bank 1 Sensor 1 · **P1112** Oxygen Sensor Control Bank 1 System Too Rich · **P1114** Bank 1 Sensor 2 Resistance Too High · **P1115** Engine Torque Control Cut Signal Circuit High Input · **P1112** Atmospheric Pressure Sensor Range Performance Problem · **P1112** Intake Air Temperature Sensor Circuit Intermittent · **P1114** Intake Air Temperature Sensor Circuit Low Input · **P1115** H02S12 Heater Circuit Low Voltage · **P1115** Engine Coolant Temperature Sensor Intermittent · **P1112** Intake Air Temperature Sensor Intermittent Low Voltage · **P1114** Engine Coolant Temperature Sensor Intermittent · **P1114** Intake Air Temperature B (IAT2) Circuit Low Input · **P1115** Intake Air Temperature B (IAT2) Circuit High Input · **P1112** Intake Air Temperature Sensor Intermittent · **P1115** Engine Coolant Temperature (ECT) Sensor Circuit Intermittent · **P1114** Engine Coolant Temperature (ECT) Sensor Circuit Intermittent · **P1112** Intake Air Temperature (IAT) Sensor Circuit Intermittent Low · **P1115** Coolant Temperature Sensor Plausibility · **P1112** Engine Coolant Temperature Radiator Outlet Sensor High Input · **P0171** System Too Lean (Bank 1) · **P0507** Idle Control System RPM Higher Than Expected

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/chrysler-p1113/>

