

P0113: INTAKE AIR TEMPERATURE SENSOR 1 CIRCUIT HIGH INPUT

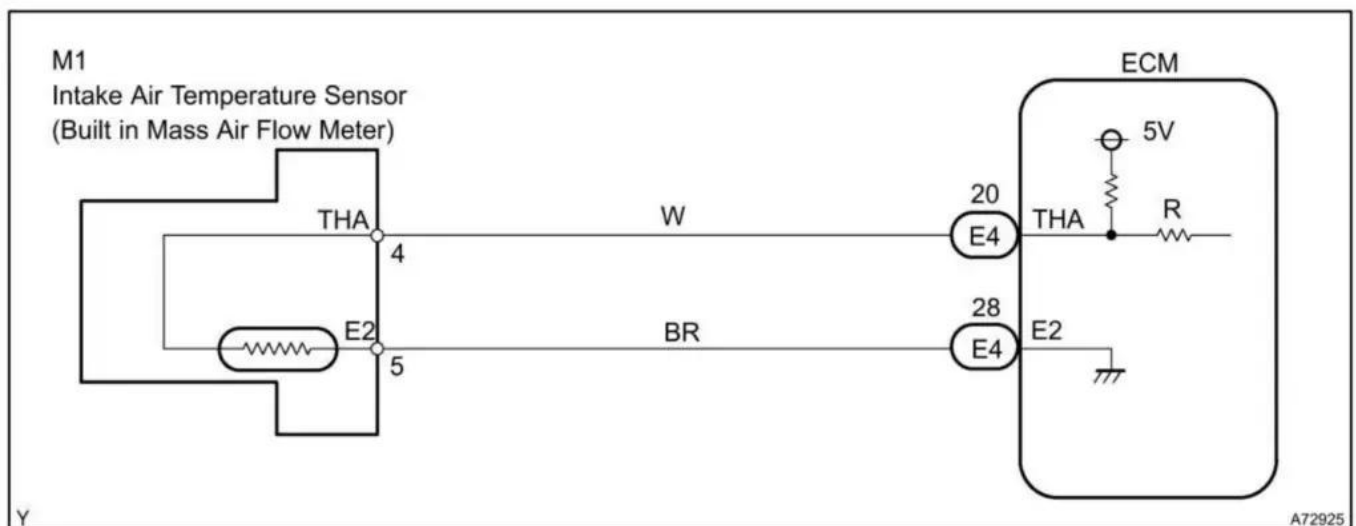
OVERVIEW

Severity	:	<div><div>Medium</div></div>
DIY Difficulty Level	:	<div><div>Intermediate</div></div>
Repair Cost	:	\$90-\$1000
Can I Still Drive?	:	Yes (Short-term only)

What Does The P0113 Code Mean?

The powertrain control module (PCM) monitors the temperature of the air entering the engine. The PCM supplies a 5 volt reference voltage to the Intake Air Temperature (IAT) sensor

The IAT is a thermistor that varies resistance based on temperature. As the temperature increases, resistance decreases. Low temperature results in a high signal voltage. When the PCM sees a signal voltage higher than 5 volts, it sets this P0113 check engine light code.



P0113 wiring diagram

What Are The Symptoms Of The P0113 Code?

There will likely be no symptoms other than illumination of the Malfunction Indicator Lamp (MIL – Check Engine Light / Service Engine Soon).

What Are The Potential Causes Of The P0113 Code?

A code P0113 may mean that one or more of the following has happened:

- Internally failed IAT sensor
- Faulty connection at IAT sensor
- Open in IAT ground circuit or signal circuit
- Short to voltage in IAT signal circuit or reference circuit
- IAT harness and/or wiring routed too close to high-voltage wiring (e.g. alternator, spark plug cables, etc.)
- Faulty PCM (less likely but not impossible)

How Can You Fix The P0113 Code?

First, if you have access to a scan tool, is there an IAT reading? If the IAT reading is logical then the problem is likely intermittent. If the reading is less than -30 degrees, unplug the connector. Install a jumper wire between the harness connector signal and ground circuits.

The IAT temperature reading on the scan tool should be maxed out at the high end. For example it should be 280 degrees Fahrenheit or higher. If it is, the wiring is okay, and it may have been the connection. If it isn't install the jumper wire between the IAT signal circuit and the chassis ground.

If now the IAT reading on the scan tool is maxed out then check for an open in the IAT ground circuit. If you get no reading at all on the scan tool, it's likely that the sensor signal is open or the 5 volt reference is missing. Check using a DVOM (digital volt ohm meter) for a 5 volt reference. If it's there, then unplug the connector at the PCM and check for continuity on the IAT signal circuit between the PCM connector and the IAT connector.

Other IAT sensor and circuit related DTCs: [P0095](#), [P0096](#), [P0097](#), [P0098](#), [P0099](#), [P0110](#), [P0111](#), [P0112](#), [P0114](#), [P0127](#)

Reference Sources

- [Diagnostic Trouble Code \(DTC\) Charts and Descriptions for P0113](#) - Page 23.
- [DIAGNOSTIC TROUBLE CODE DIAGNOSIS](#) - page 1F-55.