

P0410: SECONDARY AIR INJECTION SYSTEM MALFUNCTION

OVERVIEW

Severity	:	<div><div>Medium</div></div>
DIY Difficulty Level	:	<div><div>Intermediate</div></div>
Repair Cost	:	\$200-\$400
Can I Still Drive?	:	Yes

What Does The P0410 Code Mean?

The P0410 code refers to the emissions system. The AIR pump puts air to the exhaust to lower emissions. It takes in outside air and pumps it through two one-way check valves into each bank of the exhaust.

About 90% of the time that this code is set, the one-way check valves have worn out or failed and allow water (which occurs naturally in the exhaust) back into the pump. In any cold climate, especially in climates with higher humidity, this water may be more excessive. The water partially fills the AIR pump, it can then freeze. When the PCM commands the pump on, if the pump is frozen it cannot turn, thus overloading the circuit and "popping" the fuse.

Other secondary air injection system trouble codes include [P0411](#), [P0412](#), [P0413](#), [P0414](#), [P0415](#), [P0416](#), [P0417](#), [P0418](#), [P0419](#), [P041F](#), [P044F](#), [P0491](#), and [P0492](#).

What Are The Symptoms Of The P0410 Code?

Possibly symptoms include:

- MIL illumination obviously
- Hesitation on acceleration
- Noise from a bad/stuck AIR pump

What Are The Potential Causes Of The P0410 Code?

A code P0410 may mean that one or more of the following has happened:

- Water may have collected in the AIR pump or the vent solenoid and frozen or corroded the pump
- Blown AIR pump fuse due to freezing up

How Can You Fix The P0410 Code?

Note: There is a technical service bulletin (TSB) regarding this code for a number of GM models. The TSB calls for the replacement of the AIR pump and the installation of a new secondary injection hose. The TSB can be found on this ACDelco site.

Additionally, if you simply replace the AIR pump the problem may return again (and again). If you replace the pump, also clean out the hoses and replace the one-way check valve. If this is on a GM model that the TSB applies to, follow those instructions in the link above. In a few cases, people have put a small hole in the rubber cover on the pump which allows any water to drain out.

Also, please note that this may be covered under the emissions warranty on the vehicle. If your vehicle is out of bumper-to-bumper warranty, check if the emissions warranty is still valid!

- Replace the AIR pump AND one-way check valve
- Test and clean the AIR pump AND test and replace the one-way air check valve
- Replace the AIR pump inlet hose
- Replace the AIR pump fuse (found under the hood)

Reference Sources

[P0410 Secondary Air Injection System Malfunction](#), OBD-Codes.