

P0065: AIR ASSISTED INJECTOR CONTROL RANGE/PERFORMANCE

OVERVIEW

Severity	:	Low
DIY Difficulty Level	:	Intermediate
Repair Cost	:	\$100-\$350
Can I Still Drive?	:	Yes (Short-term only)

What Does The P0065 Code Mean?

The Air Assisted injector is similar a normal fuel injector. Just like the name implies, it uses air to assist in atomizing the fuel that is being injected/sprayed. In most cases, this particular injector is used to help with cold starts. When your engine is cold, It requires a richer air/fuel mixture (more fuel) in order to start.

The atomization that happens when air is introduced to a normal injector is desired simply because it aids in a more evenly distributed spray. This matters because generally speaking, these systems only use one injector mounted to the throttle body or intake and the atomized fuel spray is distributed between X number cylinders.

The ECM (engine control module) illuminates the check engine light with P0065 and associated codes when it monitors a condition outside of a specific range within the Air Assisted Injector's circuit. Generally speaking this is an electrical issue but sometime an internal malfunction within the injector itself may cause this condition.

P0065 Air Assisted Injector Control Range/Performance code is set when the ECM monitors an out of range condition within the injector. This air assisted injector control DTC is closely related to [P0066](#) and [P0067](#).

What Are The Symptoms Of The P0065 Code?

Symptoms of a P0065 engine code may include:

- Hard to start when engine is cold
- Smoking
- Poor performance when cold
- Engine misfiring
- Poor fuel mileage

What Are The Potential Causes Of The P0065 Code?

Causes for this code may include:

- Broken or damaged wiring harness
- Vacuum leak within injector or in hoses/clamps
- Fuse/relay defective
- Air Assisted Fuel Injector defective
- ECM issue
- Pin/connector problem. (e.g. corrosion, overheating, etc.)

How Can You Fix The P0065 Code?

Be sure to check for technical service bulletins (TSBs) for your vehicle. Getting access to a known fix can save you time and money during diagnosis.

Tools

Whenever you are working with electrical systems, some of the basic tools that are a good idea to have are:

- OBD code reader
- Multimeter
- Basic socket set
- Basic ratchet and wrench sets
- Basic screwdriver set
- Rag/shop towels
- Battery terminal cleaner
- Service manual

Safety Tips

- Let engine cool

- Chalk wheels
- Wear PPE (Personal protective equipment)

Basic Step #1

Refer to your service manual for the location of the injector on your particular make and model. Most times, you can find the injector mounted to the throttle body itself. Sometimes the vacuum lines/gaskets around the injector leak causing it to perform outside of the desired range, pay special attention here as this would be the best case scenario.

Fixing vacuum hoses/gaskets are generally inexpensive and easy to repair. With the engine running, listen for any abnormal whistle noises around these hoses indicating a leak. If you know how to operate a vacuum gauge, you will want to monitor the vacuum within the intake system while the engine is running. Record your findings and compare to your specific desired value.

NOTE: Replace any cracked vacuum hoses. These are problems waiting to happen and if you are replacing any hoses, you should inspect the rest to prevent yourself a future headache.

Basic Step #2

Test your injector. The desired electrical values within the injector varies heavily between makes and models but refer to your service manual for specifications. Most likely this will involve using your multimeter to measure resistance between the electrical pins on the injector.

NOTE: Always use appropriate multimeter lead connectors when testing pins/connectors. Too many times, techs bend pins when testing electrical components causing hard-to-diagnose intermittent problems. Be careful!

Basic Tip #3

Locate the electrical connector on the injector. Inspect for any corrosion or defects present. Repair or replace as necessary. Given the location of the injector, the harness may be routed around some tight areas where chafing may occur. Make sure the harness' and wires are in good condition and are secured properly.

NOTE: Make sure to disconnect battery before performing any electrical repairs.

Basic Step #4

Test the injector circuit. You may be able to disconnect the connector on the injector itself and the other end at the ECM. If this is possible and easy in your case, you may want to make sure you are getting continuity in the wires within the circuit. Generally you will use a multimeter and test the resistance within the particular circuit. Another test you could do is a voltage drop test. It will

determine the integrity of the wire.

Basic Step #5

Depending on your scan tool's capabilities, you may be able to monitor the Air assisted injector's operation while vehicle is running. If you can monitor actual values and compare them to specific desired values, this could help you in determining what's going on.

Severity Description

I would say the severity of this code is moderate to low. Reason being, it will not affect overall performance of engine at normal operating temperature. That being said, it will need to be addressed eventually as consistent cold starts with a possibly lean mixture could cause serious damage in the long run.

Reference Sources

[P0065: Air Assisted Injector Control Range Performance](#), OBD-Codes.