

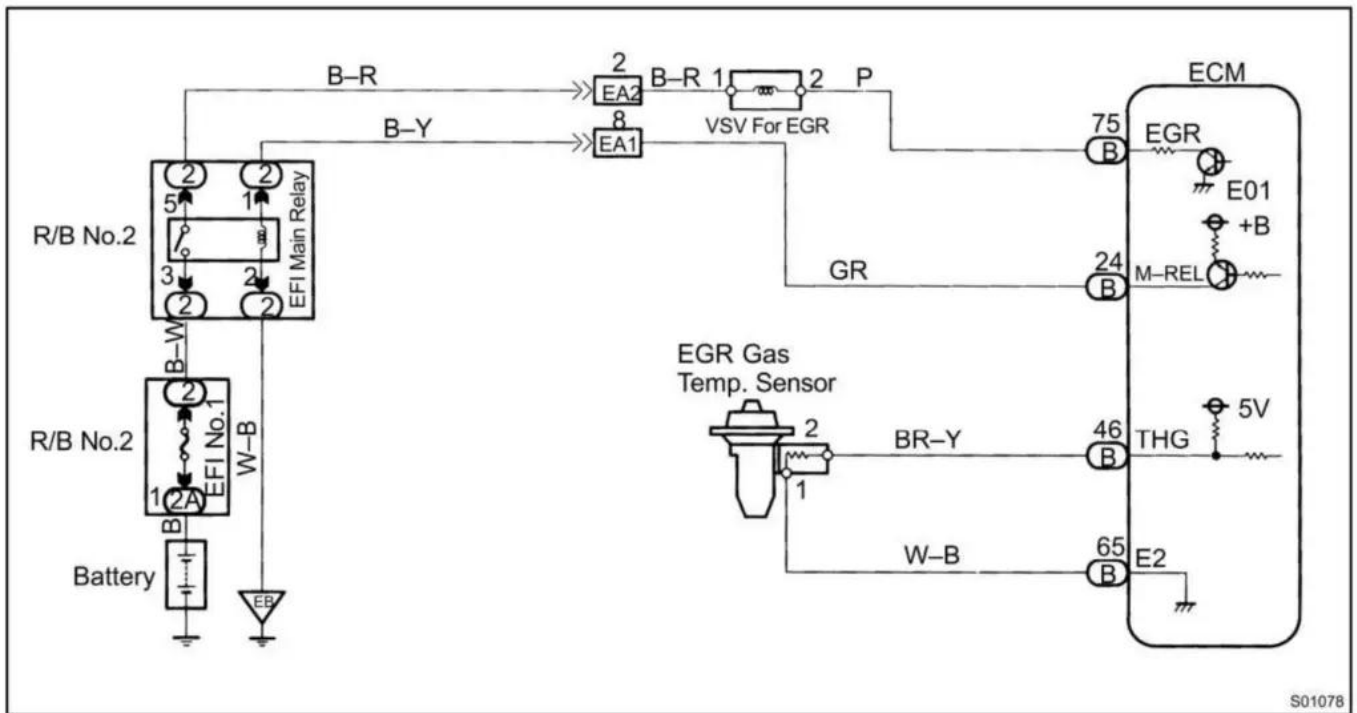
P0401: INSUFFICIENT EXHAUST GAS RECIRCULATION (EGR) FLOW

OVERVIEW

Severity	:	<div><div>High</div></div>
DIY Difficulty Level	:	<div><div>Intermediate</div></div>
Repair Cost	:	\$100-\$200
Can I Still Drive?	:	Yes

What Does The P0401 Code Mean?

EGR stands for Exhaust Gas Recirculation. It is part of the vehicle emission system, and is used to reduce combustion temperature and pressure to control Oxides of Nitrogen. There are generally three parts to the EGR system: the EGR valve, an actuator solenoid, and a differential pressure sensor EGR (DPFE). These things work together to deliver the correct amount of recirculation based on engine temperature, load, etc. The P0401 code means that OBD detected an insufficient amount of EGR.



What Are The Symptoms Of The P0401 Code?

You may notice drivability problems such as pinging (a.k.a. pre-ignition knock) when the engine is under load or the vehicle is at higher speeds. There may also be other symptoms.

What Are The Potential Causes Of The P0401 Code?

A code P0401 most likely means one or more of the following has happened:

- The DPFE (differential pressure feedback EGR) sensor is faulty and needs to be replaced
- There is a blockage in the EGR (tube), most likely carbon buildup
- The EGR valve is faulty
- The EGR valve may not be opening due to a lack of vacuum

How Can You Fix The P0401 Code?

In fixing this code, it is quite common for people to just replace the EGR valve only to have the OBD code return. The EGR valve is not always the culprit.

- Use a vacuum pump and pull the EGR valve open while monitoring engine RPM's & DPFE voltage. There should be a noticable difference in RPM's with the EGR open
- Clean out the EGR valve and/or tubing to remove deposits
- Check the voltage at the DPFE, compare to specified values (refer to a repair manual for your

specific model)

- Replace the DPFE sensor (with a good quality / OEM one)
- Replace the EGR valve

Related EGR codes: [P0400](#), [P0402](#), [P0403](#), [P0404](#), [P0405](#), [P0406](#), [P0407](#), [P0408](#), [P0409](#)

Reference Sources

[Diagnostic Trouble Code \(DTC\) Charts and Descriptions for P0401](#) - Page 66.