P0314: SINGLE CYLINDER MISFIRE (CYLINDER NOT SPECIFIED)

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Advanced
Repair Cost	:	**$200-$400**
Can I Still Drive?	:	**Yes**

What Does The P0314 Code Mean?

This code is focused on the relationship between the crankshaft position sensor (CKP), the camshaft position sensor (CMP) and the engine controller (ECM/PCM). The PCM monitors the relationship between these two sensors and compares them to an ideal reference stored in the PCM.

If the variation exceeds a calibrated percentage, a fault code is stored. This can be either an electrical fault or a mechanical issue, depending upon the reason for the misfire and the vehicle manufacturer.

Troubleshooting steps may vary depending upon manufacturer and the type of crankshaft position sensor (CKP), camshaft position sensor (CMP) and their wire colors.

What Are The Symptoms Of The P0314 Code?

Symptoms of a P0314 engine code may include:

- Malfunction Indicator Lamp (MIL) on
- Misfire / bucking or surging
- Below normal fuel economy

What Are The Potential Causes Of The P0314 Code?

Typically, the causes for this code to set are:

- Worn ignition system components, to include the coil, plug wires, spark plugs, etc.
- Fuel system components – to include the injectors

Least likely:

- Intermittent open in the power, ground or signal circuit to the crankshaft position sensor
- Intermittent open in the power, ground or signal circuit to the camshaft position sensor
- Failed PCM – rarely

How Can You Fix The P0314 Code?

A good starting point is always to check for technical service bulletins (TSB) for your particular vehicle. Your issue may be a known issue with a known fix put out by the manufacturer and can save you time and money during diagnosis.

Next, note if there are any other diagnostic fault codes. If any of them are ignition system/fuel system related, diagnose them first. Misdiagnosis has been known to occur if a technician diagnoses this code before any ignition system / fuel system related codes have been thoroughly diagnosed and dismissed. Insure there are no intake or exhaust leaks.

An intake leak, or vacuum leak, makes the engine run lean. An exhaust leak gives the impression of a lean running engine by the air/fuel ratio sensor/oxygen sensor (AFR/O2).

After that, clear all diagnostic trouble codes and see if the P0314 returns. If it does not, then the problem was intermittent or the P0314 was a memory code, that is it was something in the past.

If the code resets, that is comes right back the next time you start the vehicle or the very next road test, further inspection is required. Locate the CKP sensor and the CMP sensor on your particular vehicle. Once located, visually inspect the connectors and wiring. Look for scraping, rubbing, bare wires, burned spots or melted plastic. Pull the connectors apart and carefully inspect the terminals (the metal parts) inside the plastic connectors.

See if they look burnt or corroded in place of the normal metal color you are probably used to seeing. You can get some electrical contact cleaner and a plastic bristle brush at any parts store if you need to clean the terminals. If this is not possible, find some rubbing alcohol and a toothbrush to clean them with, just make sure you do not put the toothbrush back in the bathroom!

Afterwards let them air dry, get some dielectric silicone compound (same stuff they use for light

bulb sockets) and put some where the terminals come into contact.

Clear the diagnostic trouble codes from memory again, and see if this code returns. If it does not, then the connections were most likely your problem.

If the code does return, remove the CKP sensor and the CMP sensor from the engine. Look at the end of the sensor where it comes close to the timing components / flex plate / flywheel on the engine. Note if there is any damage to it, where it may have been struck by any of those components. If it looks like it may have been struck / damaged, it will need to be replaced. At this point in time, it is a wise suggestion to replace it with one from the OEM, or dealer.

On several occasions, techs have replaced a bad CKP sensor, only to find they must replace them again because the aftermarket sensor did not meet the voltage specifications that the PCM was looking for. With this code, relating to these two sensors, be more suspect of the CMP sensor, as the CKP sensor would tend to cause the engine to die. The CMP sensor could cause it to lose its ability to identify individual cylinders.

If the prior tests have passed and the code is still present, monitor the air/fuel ratio sensor/oxygen sensor (AFR/O2). If it continually indicates that the engine is running lean, locate any and all possibilities that could cause a lean running/misfiring engine. These include:

- Intake or exhaust leaks
- Fuel system, including fuel pressure/fuel pressure regulator
- Fuel pressure sensor
- Fuel injectors
- Ignition system
- O2 sensor after the catalytic converter
- EVAP system, to include the canister purge regulator valve.

Again, it cannot be stressed enough that all other codes must be diagnosed prior to this one, as issues that cause other codes to set can also cause this one to set as well.

If the code still cannot be cleared, the only thing left that can be done is to seek assistance from a trained automotive drivability diagnostician.

Reference Sources

P0314: Single Cylinder Misfire (Cylinder not Specified), OBD-Codes.