P2019: INTAKE MANIFOLD RUNNER POSITION SENSOR / SWITCH CIRCUIT BANK 2

OVERVIEW

Severity	:	Medium
DIY Difficulty Level	:	Advanced
Repair Cost	:	**$200-$1650**
Can I Still Drive?	:	**Yes**

What Does The P2019 Code Mean?

This generic powertrain/engine diagnostic trouble code typically applies to fuel injected engines from most manufacturers since 2003.

Those manufacturers include but are not limited to Ford, Dodge, Toyota, Mercedes, Nissan and Infiniti.

This code is mostly concerned about the value provided by the intake manifold flow control valve/position sensor, also called known as a IMRC valve/sensor (typically located at one end of the intake manifold) which helps the vehicle's PCM control the amount of air being allowed into the engine at various RPMs.

This code is set for Bank 2, which is the bank of cylinders that does not include cylinder number 1. This can be a mechanical or an electrical circuit fault, depending upon vehicle manufacturer and fuel system.

Troubleshooting steps may vary depending upon manufacturer, type of fuel system and the type of intake manifold runner control valve/position (IMRC) sensor and wire colors.

What Are The Symptoms Of The P2019 Code?

Symptoms of a P2019 engine code may include:

- Malfunction Indicator Lamp (MIL) illuminated
- Lack of power
- Occasional misfire
- Poor fuel economy

What Are The Potential Causes Of The P2019 Code?

Typically, the causes for this code to set are:

- Sticking/faulty throttle plates/body
- Sticking/faulty IMRC valve (Bank 2)
- Faulty IMRC actuator/sensor
- Rarely – faulty Powertrain Control Module (PCM)

How Can You Fix The P2019 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.

Step 1

First, note if there are any other diagnostic fault codes. If any of them are intake/engine performance system related, diagnose them first. Misdiagnosis has been known to occur if a technician diagnoses this code before any intake/engine performance related system 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/oxygen (AFR/O2) sensor.

Step 2

Next, locate the IMRC valve/sensor on your particular vehicle. Once located, visually inspect the connectors and wiring. Look for chafing, rubbing, bare wires, burn spots or melted plastic. Pull the connectors apart and carefully inspect the terminals (the metal parts) inside the connectors. See if they look corroded, burnt or possibly green in color versus the normal metal color you are probably used to seeing.

You can get some Electrical Contact cleaner at any parts store if cleaning of the terminals is needed. If this is not possible, find some 91% rubbing alcohol and a light plastic bristle brush to clean them with (an inexpensive toothbrush will work here; just don't put it back in the bathroom when done!). Afterwards let them air dry, get some dielectric silicone compound (same stuff they use for light bulb sockets and spark plug wires) and put some where the terminals come into contact.

Step 3

If you have a scan tool, clear the diagnostic trouble codes from memory, and see if this code returns. If it does not, then the connections were most likely your problem.

Step 4

If the code does return, we will need to test the IMRC valve/sensor voltage signals to and from the PCM. Monitor IMRC sensor voltage on your scan tool. If a scan tool is not available, then test the signal coming from the IMRC sensor with a digital volt ohm meter (DVOM).

With the sensor connected, the red voltmeter lead should be attached to the IMRC sensor signal wire and the black voltmeter lead connected to ground. Start the engine and monitor the IMRC sensor input. Snap the throttle. As engine RPM increases, the IMRC sensor signal should change. Check the manufacturer's specifications, as there may be a chart informing you of what the voltage should be at a given RPM.

Step 5

If it fails this test, you will need to verify that the IMRC valve will move and is not binding or sticking inside the intake manifold. Remove the IMRC sensor/actuator and grab hold of the pin or linkage that moves the plates/valves inside the intake manifold.

Keep in mind that these may have a strong return spring attached to them, so there may be tension on them as you turn them. Check for any binding/looseness in the plates/valves as you turn them. If so, you will need to replace them, and this usually means you will need to replace the entire intake manifold. This task is better left to the professionals.

If the IMRC plates/valves turn with no binding or excessive looseness, this would indicate the need to replace the IMRC sensor/actuator and retest.

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. It can also not be stressed enough that once the first step or two of diagnosis occurs and the problem is not obvious, it would be a wise decision to consult with an automotive professional regarding the repair of your vehicle, as most of the repairs from there forward require the removal and replacement of the intake manifold in order to correctly repair this code and the engine performance related issue.

Reference Sources

P2019 Intake Manifold Runner Position Sensor / Switch Circuit Bank 2, OBD-Codes.