

# Oh No... My Check Engine Light is On!

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**“With this device you can diagnose your own car!” loudly proclaims the announcer in the commercial.** “Simply plug it in, hook up your smart phone and you will know what the problem is. You can save hundreds if not thousands of dollars!” Too good to be true? Unfortunately – yes. What these devices show are data trouble codes, which are helpful in locating where the problem lies, but they do not actually diagnose the root cause of the issue. I equate it to a person going to the doctor with a pain in the shoulder. The doctor knows where the pain is, but it will take further examination, tests or even an MRI to understand why the shoulder is sending a signal to the brain that something is not right.

When that Check Engine Light (CEL) illuminates, it only means that a sensor somewhere is sending a parameter to the computer that’s outside what the engineers considered ‘normal’. It could be that the sensor has failed, or the sensor is perfectly fine and reporting an actual problem. Any auto parts store or repair shop should read the code for free, so no need to buy a device to do that but having a code doesn’t solve the problem.

For example, a common code, P0420, indicates an oxygen sensor is reporting a problem. It could be that the sensor has failed, or a wire to the sensor has broken. Or it could be that the sensor is accurately reporting too many unburned hydrocarbons at the sensor probe. That could be caused by a fuel trim issue creating too rich of a mixture, or a catalytic converter that has failed, or the vehicle is remaining in warm-up mode dumping extra fuel into the engine to warm up the catalytic converter. In fact, there are actually hundreds of reasons why an O2 sensor might report an out-of-parameters value. It takes testing with a diagnostic scan tool to determine what the real issue is.

Bottom line - decrypting a trouble code



**TIP**

does not mean the problem is diagnosed. If that were the case, auto tech schools would be out of business. And what about aftermarket gadgets that stay plugged into the car to monitor problems? Well both Ford and GM have issued Technical Service Bulletins (TSBs) regarding these devices. They found they can actually interfere with the diagnostics and operation of the vehicle! The TSBs states these devices can interfere with the data traffic on the various computer networks of the vehicle. Ford cites instances where the devices have caused modules to stop communicating – even with the shop scan tool. And GM has instances where the ABS module and engine control module have ceased to communicate. This may result in an ABS light illuminating on the dash. So, bottom line, the adage ‘If it sounds too good to be true it probably is’ certainly applies to these little devices. ■

**One tip I will offer however:** if you find your check engine light is on due to an ‘EVAP Very Small Leak’ trouble code, the most common cause is a loose gas cap or one that is not holding pressure correctly. Try tightening down the cap, and if after driving a day or two the light does not go out, try replacing the cap. Even if the gasket on the old gas cap does not look bad or show obvious tears or signs of permanent compression or distortion, I would change the cap before paying for diagnostics. Nine times out of ten we find the gas cap to be the culprit for these small leaks. Be advised, the car has to be driven with the fuel between ¼ and ¾ full for the evaporative emissions test to run and sense the cap is now tight or has been replaced.