

Amber Check Engine Warning Lamp

The amber “check engine” lamp lights to warn the driver that the vehicle computer has detected a fault with the computerized engine control system. The check engine lamp is called a malfunction indicator light (MIL) and could also be labeled “service engine soon”.

The check engine light is on all vehicles from 1988 to present and on most vehicles since 1981. Before 1996, the check engine lamp would come on only if the computer detected a fault in a circuit of a sensor or other engine control component. Since 1996, all vehicles are equipped with the second generation of on-board diagnostics called OBD-II. The purpose of OBD-II is to test not only the sensors and actuators used on the vehicle, but to also perform tests on the operation of the components as well. The check engine lamp will be turned on if certain conditions are not met during a test indicating that a component operation has degraded or is not working correctly.

The check engine lamp comes on when the ignition switch is first turned to the on position as a bulb test and should go out when the engine starts.

Wheels: What should the driver do if the amber check engine lamp comes on when driving?

Halderman: Continue to drive the vehicle normally unless the engine stalls and in that event coast over to the side of the road. In most cases, the engine will continue to operate normally. The vehicle computer is capable of substituting values for a failed sensor and after doing that the only change in the operation of the engine is often a reduction in fuel economy.

Wheels: If the check engine lamp comes on, does this mean that a serious fault has been detected?

Halderman: No. The check engine lamp will come on if the computer detects a slight engine misfire which could be caused by a cracked spark plug or a defective fuel injector. On 1996 and newer vehicles, the check engine lamp will also come on if the gas cap has not been properly tightened. This occurs because part of the OBD II requirement is that the fuel system be checked for leaks. The vehicle computer either draws a vacuum on the system or pressurizes it with a small on-board pump and checks to see if the pressure or vacuum holds. If the gas cap is slightly loose, the fuel system leak test will fail and then the check engine lamp will be turned on by the computer.

Wheels: How is the fault determined and what will a service technician do to correct the fault?

Halderman: If the check engine light is on or has been on and is now off, a diagnostic trouble code has been set. This code can be retrieved by using a scan tool in most cases. The scan tool will give the description of the code and the service technician will then follow the published procedure to locate the root cause of the problem. The code does not necessarily indicate a faulty part but rather a problem with a particular circuit. Therefore, a skilled service technician is needed to properly diagnose the cause of a check engine light.

