

## What's with that engine light on my dash?

**OBD**, or on board diagnostics, was first introduced by General Motors in 1981. The purpose of 'OBD' was to monitor the emission control system in the car. When the computer system of your vehicle sees a fault in the emission control system, three things are supposed to happen. First, it would set a warning light on the dashboard, to inform you that a problem existed. Second, to set a code in the computer. Third to record that code in the computer's memory, that can be later retrieved by a technician for diagnosis and repair.

This system worked so well that in 1986 California mandated that all cars sold in the state be equipped with 'OBD'. This then became an industry standard throughout the nation, and all cars sold in the nation had some form of 'OBD'

This first version of 'OBD' had a lot of shortcomings. First, it only covered the engine emission system. The fuel tank vapors were not monitored. The exhaust emissions were not measured. And only devices specifically installed for emission control were monitored. Second, there was no standardization throughout the industry. Each manufacturer had a different term for the warning light that was illuminated when a fault was determined. GM called it a *check engine* or *service engine* light. Chrysler called it a *power loss* light. Ford called it an *engine* light. Most import cars called it a *check engine light*. This was not only confusing to the technician, but also to the motorist. Many motorists upon seeing the *service engine* light illuminated, brought their car to a repair facility and either asked for an oil change or tune-up, expecting the light to go out. Needless to say, this did not happen, and after spending unnecessary money on service work, the system then had to be diagnosed and repaired. The coding system for each manufacturer was also different making diagnosis much tougher.

The clean air act of 1990 mandated that beginning with the 1996 model year, all cars sold in the U.S. be equipped with a new version of on board diagnostics This system became known as **OBD II**. The manufacturers beat the deadline and almost all cars were equipped with **OBD II** in the 1995 model year. If your car is a 1995 model or newer, chances are it is equipped with **OBD II**.

Among the many differences between **OBD** and **OBD II**, was the standardization of the system. All dashboard warning lights now say '*check engine*', usually with a picture of an engine with the word 'check' across it. The coding system is now standard. There are now over 400 possible trouble codes that can be stored in the system. If the gas cap is left loose and vapors are escaping from the gas tank, the *check engine* light will be illuminated and a code will be set. It is extremely important now that the engine be shut off when refueling the vehicle. Another big difference between the systems is that with **OBD** when a fault is seen the warning light is illuminated and a code set. The warning light will then go out when the fault is no longer seen, but the code will be set and retained in the computer's memory. In **OBD II** systems the light does not go out until the fault is repaired and reset by the technician. This can create two problems for you, the motorist.

First: if the warning light is set because of a loose gas cap, it will not go out when the cap is tightened. The car will have to be brought to a service facility to reset the light, at a cost to the motorist.

Second: the danger exists that when the car is brought into a repair facility, the technician might reset the light without actually repairing the fault. In this case the light will come back on again.

It is important that the motorist be aware of the ***check engine*** light, as well as all other dashboard warning lights and what they mean. This knowledge will help eliminate unnecessary costs due to unnecessary repairs. When any dashboard warning light comes on, check the owner's manual before bringing the car to a repair facility.

New York State now mandates if your ***check engine*** light is present or the vehicle readiness monitors are not in a "ready" state, your vehicle will not pass the New York State vehicle inspection.