



## Vermont Motor Vehicle Inspection Program On Board Diagnostic (OBD) Check

### Frequently Asked Questions

As of July 1999, on board diagnostic systems (OBD) on 1996 and newer vehicles are being checked as part of Vermont's annual vehicle inspection program. OBD technology benefits motorists, automotive service technicians, and our environment. It's good for motorists because it monitors the vehicle's performance every time it is driven and identifies problems immediately, allowing repairs to be made before more serious problems develop. It's good for technicians because it helps them to accurately diagnose problems, allowing for efficient and proper repairs. And it's good for our environment and our health because it identifies problems that cause vehicle emissions to increase.

#### **What is OBD and how does it work?**

OBD technology was developed in the 1980s by vehicle manufacturers to help technicians diagnose and service the computerized engine management systems of modern vehicles. A new generation of OBD (often referred to as OBD II) is present on 1996 and newer vehicles. OBD II monitors all components that make up the engine management system. It can detect a malfunction or deterioration of these components usually well before the driver becomes aware of any problem. When a problem is detected, the OBD system turns on a warning light on the instrument panel to alert the driver of the need to have the vehicle checked by a service technician.

#### **What does the OBD check involve?**

First, the vehicle is checked to see if the Malfunction Indicator Light (commonly called the "check engine" or "service engine soon" light) on the instrument panel illuminates when the ignition key is turned to the "on" position and then when the engine is running. Next, an electronic device known as a scan tool is connected to the vehicle, and used to communicate with the vehicle's on board computer. The on board computer is checked to confirm that the vehicle has completed its self-tests, to determine if the computer has attempted to turn on the Malfunction Indicator Light, and if applicable, to retrieve diagnostic trouble codes. The results are recorded, and the scan tool is disconnected from the vehicle. The entire OBD check typically takes less than 5 minutes.

#### **Why is the OBD check needed?**

Motor vehicles are the largest source of toxic and ozone-forming air pollutants in Vermont. While modern vehicles are getting much cleaner due to newer engine management technology and emission control components, emissions stay low only when all these systems are working properly. OBD technology helps to ensure that vehicles are operating as designed, and the OBD check ensures that the vehicle's OBD system is doing its job.

## **What if my vehicle failed the OBD check?**

If your vehicle failed, it must be repaired in order to receive a new inspection sticker. Your vehicle should be repaired by a qualified, trained automotive service technician equipped with the appropriate diagnostic and repair tools. Depending on your vehicle's age and mileage, repairs may be covered by the vehicle manufacturer's warranty. Refer to your vehicle owner's manual for specific information on warranty coverage.

Following are the possible reasons for failing the OBD check:

- 1) The vehicle's OBD system connector has been removed or is otherwise not working properly. *The OBD check cannot be completed if the connector is missing or is not working properly.*
- 2) The Malfunction Indicator Light does not illuminate at all when the ignition key is turned to the "on" position. *When the vehicle's OBD system detects a problem it turns on the warning light to alert the driver to a problem. However, if the light can not illuminate because the bulb has burned out or is otherwise not working, the driver would not be alerted to the problem.*
- 3) The Malfunction Indicator Light on the instrument panel is on (and/or commanded on by the vehicle's on board computer) while the engine is running. *This indicates that the OBD system has identified a problem which must be repaired. In this case, one or more diagnostic trouble codes will also be reported by the vehicle's OBD system. These diagnostic trouble codes will help your technician diagnose and repair your vehicle.*

## **What if my vehicle's OBD system is "not ready"?**

If your vehicle's OBD system is not ready, the inspection of your vehicle's OBD system cannot be completed. While this does not necessarily mean that your vehicle has a problem, it does indicate that your vehicle's OBD system has not yet completed its tests, and problems may be present, but not yet identified. A recently disconnected or discharged (run down) battery, or recent servicing using a scan tool are the most likely reasons for a vehicle's OBD system being "not ready." Note that there are a few vehicles which should not be rejected as "not ready". Ask your inspection station or the Department of Motor Vehicles for further information about these exceptions.

## **How do I get my vehicle's OBD system "ready"?**

The vehicle should be driven under a variety of normal operating conditions in order for the OBD system to become ready. These operating conditions include a mix of highway driving and stop and go, city type driving, and at least one overnight-off period. Your vehicle owner's manual should provide more specific information on getting your vehicle's OBD system ready.

For more information: Ask your inspection station for a copy of the OBD brochure, or contact the Department of Motor Vehicles at 828-2067.