Automotive Technical English

SESSION 2

INTRODUCTION TO ON-BOARD DIAGNOSTICS (OBD)

All modern vehicles, equipped with internal combustion engines, contain several systems/components which have the specific purpose of reducing toxic exhaust gas emissions. This is mandatory because every new vehicle sold needs to be compliant with the current emission limit legislation.

The engine systems and components, which have impact on exhaust gas emissions, must be monitored continuously to make sure that the toxic emission limits required by law/legislation are achieved on a daily basis.

OBD (On-board Diagnostics) is a set of rules, software and hardware, with the specific purpose of monitoring the powertrain components/systems, whose functionality has an impact on exhaust gas toxic emissions levels. With other words, if a specific powertrain component, in case of an effect/failure, leads to increased toxic exhaust gas emission levels, it must be OBD monitored.



Image: Malfunction Indicator Lamp (MIL)

The OBD standard specifies that the driver must be warned if there is a failure with any system/component which has impact on the level of toxic exhaust gas emissions. If such a failure occurs, the driver is informed through the MIL lamp on the dashboard.

There are two types of MIL lamps: an icon with the shape of an engine, and an icon with the message “SERVICE ENGINE SOON”. Both have the same meaning; they inform the driver about an OBD related system/component failure.

Choose True or False:

1. Modern vehicles are manufactured to reduce toxic exhaust gas emissions. True False
2. The engine systems and components mustn’t be monitored continuously. True False
3. OBD is composed of a set of rules to monitor the powertrain components/systems. True False
4. An OBD is done when there is a failure that increases toxic gas emission levels. True False
5. A failure is shown through the MIL lamp. True False

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