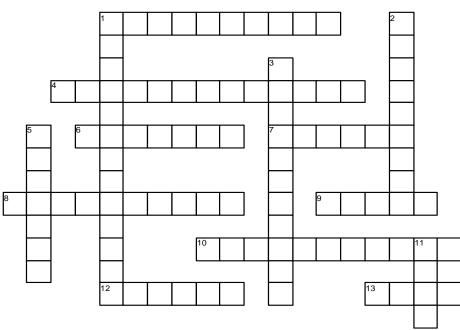


## Automotive Electrical and Engine Performance 9th Edition Chapter 44 - On-Board Diagnosis



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## ACROSS

- 1 \_\_\_\_\_\_ Air Resources Board (CARB): A gov ernment agency responsible for regulating air quality, including establishing emission standards for vehicles sold in California.
- Weighted Moving Average (EWMA)
  Monitor: A type of monitor that averages values over time to detect gradual changes in performance.
- 6 \_\_\_\_\_ Test Procedure (FTP): A standardized test that simulates urban driving conditions to measure vehicle emissions and ensure compliance with emission standards.
- 7 \_\_\_\_\_\_-frame: A snapshot of engine data recorded at the moment a Diagnostic Trouble Code (DTC) is set, providing details to aid in troubleshooting.
- 8 \_\_\_\_\_ Executive: A special software segment within the PCM, responsible for coordinating the running of diagnostic tests and managing their results.
- **9** On-\_\_\_\_Diagnostics (OBD): A system that monitors and reports the performance of vehicle components and emissions systems.
- **10** A test that compares sensor values to expected parameters, ensuring signals make sense logically.
- **12** \_\_\_\_\_ Criteria: Specific conditions that must be met for a diagnostic monitor to run, such as temperature or speed requirements.
- 13 \_\_\_\_\_ Identification (TID): A number used to identify specific diagnostic tests performed by the vehicle's PCM.

## DOWN

- 1 \_\_\_\_\_ Component Monitor (CCM): A monitor in the vehicle's powertrain control module (PCM) that continuously checks for proper operation of emissionrelated and non-emission-related circuits.
- 2 \_\_\_\_\_ Identification (PID): Data points used by scan tools to display information from the vehicle's PCM, such as sensor readings.
- 3 \_\_\_\_\_ Indicator Lamp (MIL): Also known as the Check Engine Light, it alerts the driver to malfunctions in the engine or emission control system.
- **5** \_\_\_\_\_\_ of Automotive Engineers (SAE): An organization that sets technical standards for automotive systems, including those related to diagnostics.
- **11** \_\_\_\_\_ Manager: A software function in the PCM that determines when diagnostic monitors should run and in what order, prioritizing them as needed.