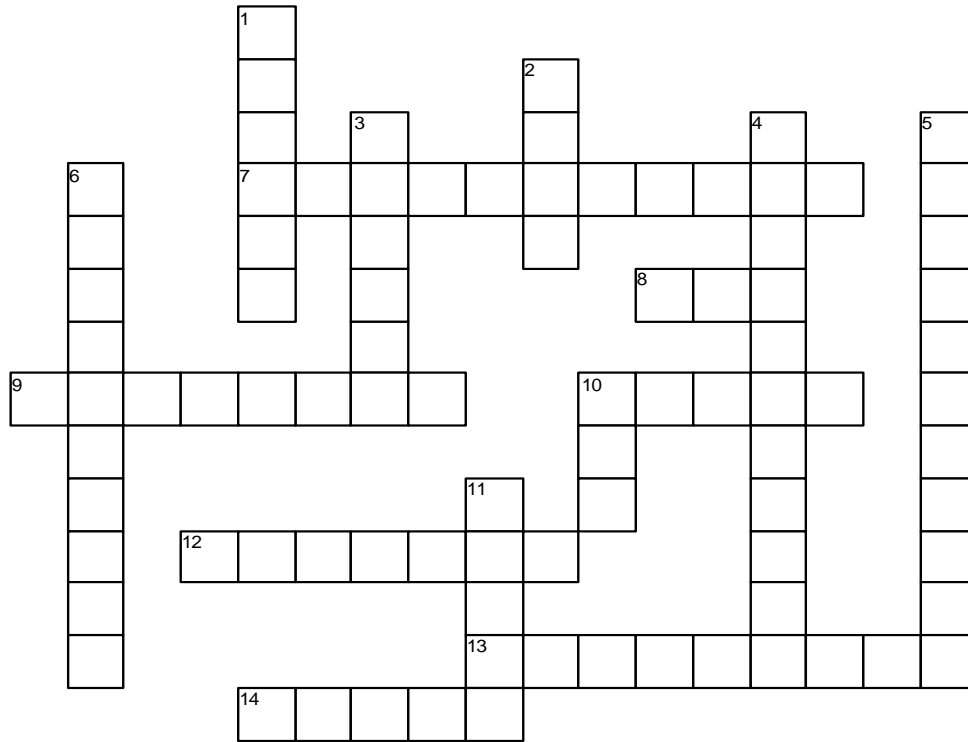


Automotive Electrical and Engine Performance 9th Edition

Chapter 24 - Scan Tools



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ACROSS

- 7** Bi-_____ testing: A capability in scan tools that allows technicians to send commands to vehicle components, such as turning on lights or activating the horn, to verify functionality.
- 8** No fault affecting emissions has been detected but this does not necessarily mean that a fault is not present.
- 9** Another function of some _____ scan tools includes the capability of reprogramming, also known as J2534 reflashing. J2534 programming is an SAE standard that permits the automotive service technician to reprogram the PCM if the vehicle concern can be corrected by changes to the calibration of the PCM software.
- 10** The smart _____ scan tool is a device that plugs into the DLC and transmits data via Bluetooth to a smart phone equipped with a scan tool app.
- 12** _____ scan tools are the scan tools required by all dealers that sell and service the brand of vehicle.
- 13** _____ Codes: Diagnostic codes stored in the vehicle's computer that cannot be erased until the malfunction has been resolved and the vehicle passes necessary self-tests.
- 14** A fault that can cause damage to the catalytic converter has been detected. The vehicle should not be driven until the fault has been diagnosed and corrected.

DOWN

- 1** A code _____ is a low-cost scan tool that can display only global (generic) trouble codes.
- 2** _____ Link Connector (DLC): A standardized 16-pin port located in the vehicle, usually under the dashboard, which allows scan tools to connect and communicate with the vehicle's onboard computer.
- 3** To assist the service technician, OBD-II requires the PCM to take a "snap-shot" or _____-frame of all data at the instant an emission-related DTC is set.
- 4** _____ Indicator Lamp (MIL): Also known as the Check Engine Light (CEL), this dashboard warning light informs the driver of a potential issue affecting the vehicle's emissions or performance.
- 5** _____ diagnostic scan tools are manufactured by many manufacturers and use the data licensed from each original equipment manufacturer (OEM).
- 6** _____ Trouble Code (DTC): A code generated by the vehicle's computer system to indicate a specific malfunction or fault in the vehicle.
- 10** The 16-_____ data link connector adheres to the SAE J1962 standard. It is located on the driver's side on all vehicles sold in North America, starting with model year (MY) 1996.
- 11** Many aftermarket scan tools can display the voltages from sensors as a _____ instead of just numbers.