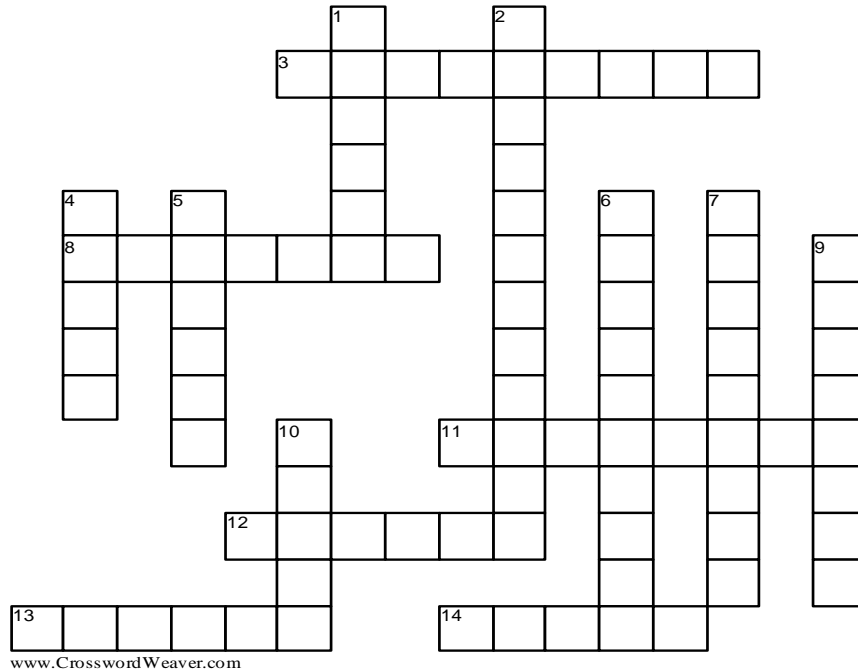


Automotive Electrical and Engine Performance 9th Edition

Chapter 30 - Ignition System Diagnosis and Service



ACROSS

- 3** _____ Ignition Circuit: The high-voltage side of the ignition system, including the coil's secondary winding, distributor, and spark plugs.
- 8** _____ Ignition Circuit: The low-voltage side of the ignition system, which controls the operation of the ignition coil.
- 11** _____ Position (CMP) Sensor: A sensor that monitors the position of the camshaft to help synchronize the firing of the ignition system with the engine's valve timing.
- 12** _____ and Replace (R&R): A service term referring to the process of removing a component and installing a new one, often used in maintenance tasks like changing spark plugs.
- 13** _____ Induction: The process by which a magnetic field in one coil induces a voltage in another coil, used in ignition systems to generate high voltage.
- 14** _____-Spark Ignition: An ignition system where one coil fires two spark plugs simultaneously, with one plug firing on the exhaust stroke.

DOWN

- 1** Spark _____: A diagnostic tool used to verify the presence and strength of spark in the ignition system.
- 2** _____ Oscillations: The oscillations that occur in the ignition coil after the spark event, representing the dissipation of leftover energy.
- 4** _____ Line: The section of the ignition scope pattern that represents the duration of the spark across the spark plug gap.
- 5** _____ Line: The initial vertical spike on a scope pattern indicating the moment when the spark begins and the coil releases energy.
- 6** _____ Position (CKP) Sensor: A sensor that monitors the position and rotational speed of the crankshaft to control ignition timing and fuel injection.
- 7** _____ Shutdown (ASD) Relay: A relay used to cut off power to the ignition system and fuel injectors in case of a detected fault to prevent engine operation.
- 9** _____ Timing: The precise timing of the spark plug firing to ensure efficient combustion, controlled by the vehicle's computer.
- 10** _____ Section: The part of the ignition scope pattern representing the time during which the ignition coil is charging before firing.