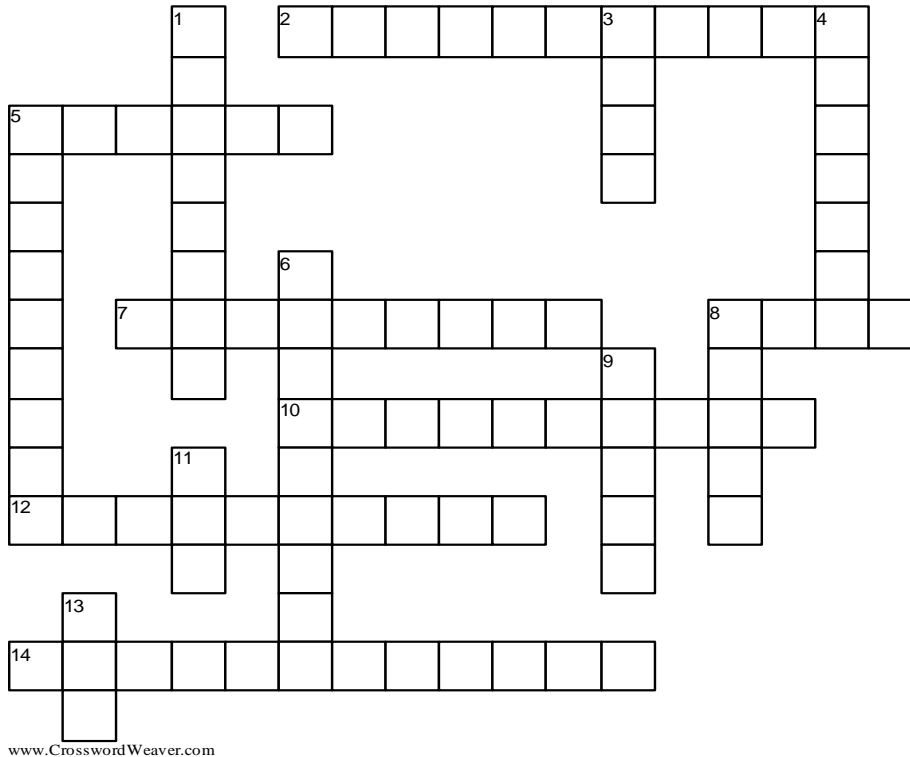


Automotive Electrical and Engine Performance 9th Edition Chapter 27 - Gasoline, Diesel, and Alternative Fuels



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ACROSS

- 2** _____ Fuel Vehicle: A vehicle designed to run on non-traditional fuels such as ethanol, biodiesel, or compressed natural gas (CNG).
- 5** _____ number: A measure of a diesel fuel's ignition quality, with higher cetane numbers indicating faster ignition.
- 7** _____ index (AKI): A measurement of a fuel's ability to resist knocking or pinging during combustion, expressed as the average of the research octane number (RON) and motor octane number (MON).
- 8** _____ Filter Plugging Point (CFPP): The lowest temperature at which diesel fuel can pass through a filter without clogging, used to assess cold-weather performance.
- 10** A type of abnormal combustion where fuel ignites prematurely, causing knocking or pinging sounds and potentially damaging the engine.
- 12** _____ natural gas: A fuel composed primarily of methane, used as an alternative to gasoline or diesel in vehicles equipped with CNG systems.
- 14** The process of separating different components of crude oil based on their boiling points to produce fuels like gasoline, kerosene, and diesel.

DOWN

- 1** A refining process that involves breaking down larger hydrocarbon molecules into smaller ones to produce fuels like gasoline and diesel.
- 3** _____: An organization that sets standards for the quality and properties of fuels, including gasoline and biodiesel.
- 4** An alcohol-based fuel made from renewable sources such as corn, used as an additive or primary fuel in some engines.
- 5** _____ cracking: A refining process that breaks down heavy hydrocarbons into lighter ones to increase gasoline and diesel production.
- 6** A renewable fuel derived from vegetable oils or animal fats, used as an alternative to petroleum-based diesel.
- 8** _____ point: The temperature at which wax crystals form in diesel fuel, causing it to appear cloudy, which can affect engine performance in cold conditions.
- 9** _____ alcohol: Another term for ethanol, used in fuel blends to improve combustion and reduce emissions.
- 11** _____ gravity: A measure of the density of petroleum liquids relative to water, used to determine fuel quality and performance characteristics.
- 13** _____-fuel ratio: The ratio of air to fuel required for the combustion process in an engine, typically measured to ensure optimal engine performance and emissions.