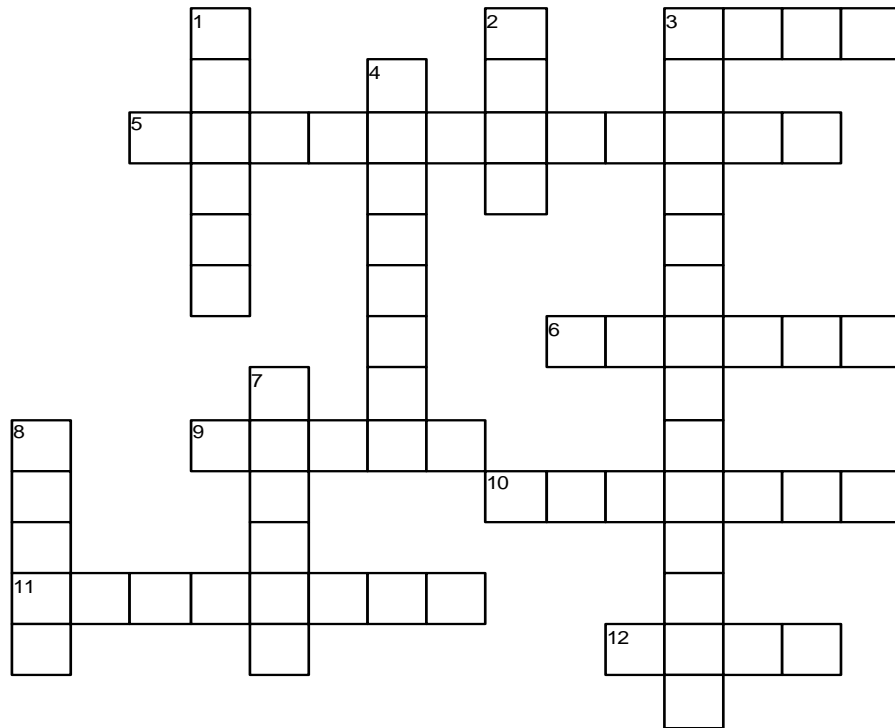


Automotive Electrical and Engine Performance 9th Edition Chapter 40 - Vehicle Emission Standards and Testing



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ACROSS

- 3 A type of air pollution formed by the combination of smoke and fog, with ground-level ozone being a major constituent.
- 5 Unburned fuel particles emitted from the exhaust, indicating incomplete combustion.
- 6 _____ of Nitrogen: A group of gases formed when nitrogen reacts with oxygen under high pressure and temperature, contributing to air pollution.
- 9 A byproduct of combustion formed when hydrogen in the fuel reacts with oxygen.
- 10 _____ Test Procedure (FTP): A standardized testing method used to measure vehicle emissions and ensure compliance with regulatory standards.
- 11 A gas that makes up approximately 78% of the air, which can combine with oxygen under high temperatures to form nitrogen oxides.
- 12 _____ indicator: A condition in which exhaust gases contain excess carbon monoxide, indicating a rich air-fuel mixture.

DOWN

- 1 A critical component in the combustion process, with normal levels in the exhaust ranging between 0% and 2%.
- 2 _____ indicator: A condition where the exhaust contains more oxygen than normal, suggesting a lean air-fuel mixture.
- 3 _____ ratio: The ideal air-fuel mixture ratio of 14.7:1 for gasoline engines, where all fuel is burned using the available oxygen.
- 4 Carbon _____ (CO): A harmful gas formed due to incomplete combustion when insufficient oxygen is present in the combustion chamber.
- 7 _____ dioxide (CO₂): A gas produced as a result of complete combustion when oxygen combines with carbon in the fuel, typically representing between 12% and 15% of the exhaust gases.
- 8 A molecule made up of three oxygen atoms, commonly found as a component of smog in the lower atmosphere.