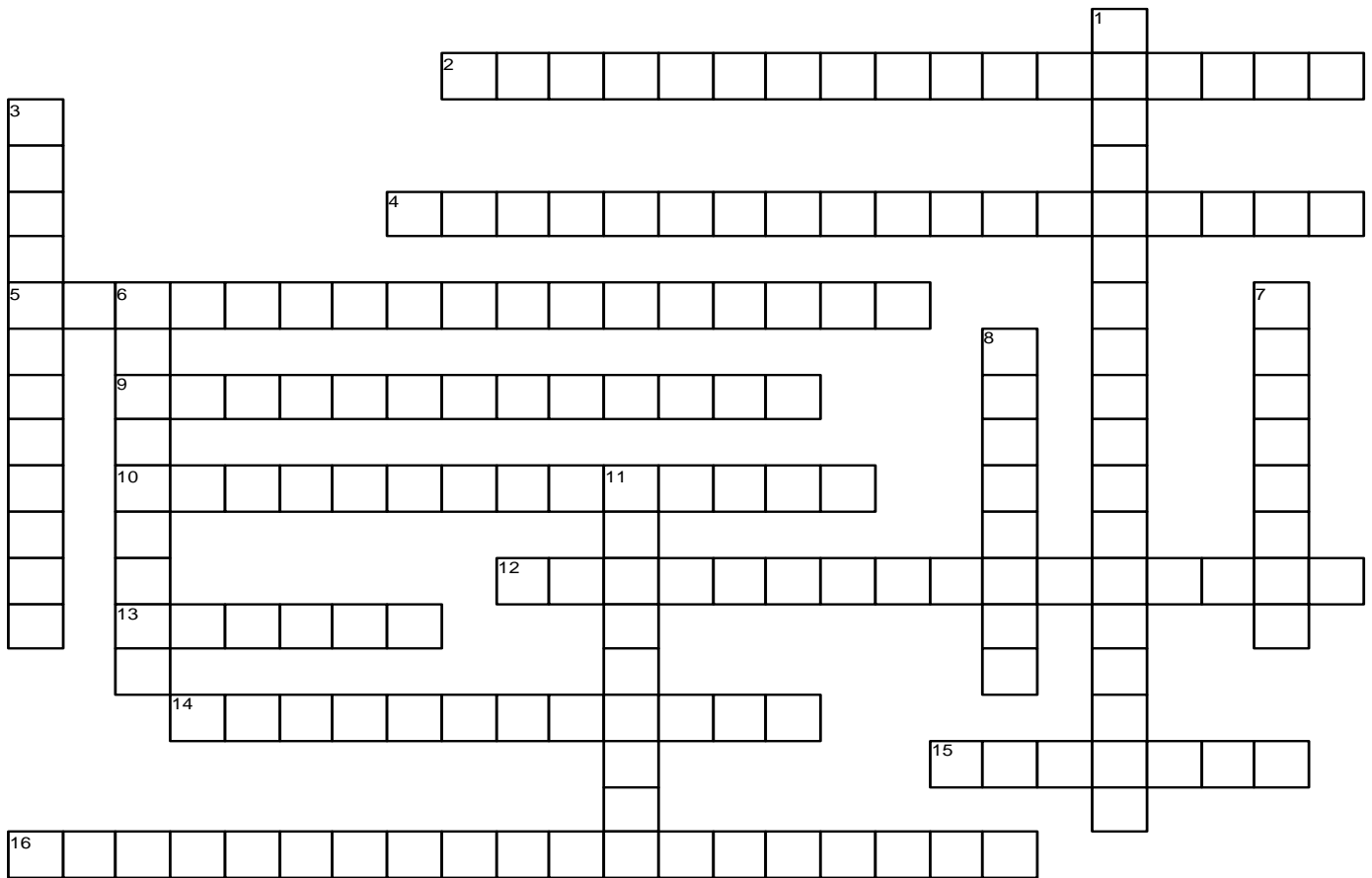


Exhaust and Aftertreatment Systems

Chapter 15



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ACROSS

- 2 _____ (PM), also called soot, refers to tiny particles of solid or semisolid material suspended in the atmosphere.
- 4 During an _____ event, heat is created by adding fuel to the exhaust stream.
- 5 The diesel _____ is located in a stainless-steel housing near the diesel oxidation catalyst and is responsible for making the exhaust virtually smokeless.
- 9 _____ fluid is a mixture of 32.5% laboratory grade urea and 67.5% deionized water.
- 10 _____ (CO) is a result of partially burned diesel fuel.
- 12 An _____ (NO) is a colorless, tasteless, and odorless gas when it leaves the engine, but as soon as it reaches the atmosphere and mixes with more oxygen, nitrogen oxides (NO₂) are formed.
- 13 There is about 21% _____ (O₂) in the atmosphere.
- 14 A _____ pressure sensor is used to determine if a restriction exists in the dPf, indicating a need for service or replacement.
- 15 When _____ reacts with oxides of nitrogen (NO_x), a reduction reaction takes place and the NO_x is converted to nitrogen dioxide and water.

- 16 During a _____ event, the engine load is sufficient enough to create the exhaust temperatures needed to eliminate the particulate matter.

DOWN

- 1 During _____, the exhaust system will get much hotter than normal. Specific procedures must be followed to ensure there is no damage to the vehicle or harm to the service technician.
- 3 The addition of an exhaust _____ regulator to the exhaust system will allow the engine to warm-up to operating conditions more quickly.
- 6 A selective catalyst _____ system is designed to reduce the level of oxides of nitrogen in the exhaust stream.
- 7 A NO_x _____ catalyst is a maintenance-free strategy for removing NO_x emissions in a low-temperature, oxygen-rich environment.
- 8 The exhaust _____ is a critical part of the exhaust system and can be seen coming off the turbocharger.
- 11 On most modern diesel engines, the diesel _____ catalyst is the first major component in the exhaust aftertreatment system after the exhaust downpipe.