

# Diesel Engine Operation And Diagnosis

## Chapter 4

### ACROSS

1 Urea is called \_\_\_\_\_

\_\_\_\_\_ in North America and AdBlue in Europe.

2 Ford 7.3 and 6.0 liter diesels use a system called a \_\_\_\_\_

\_\_\_\_\_ system.

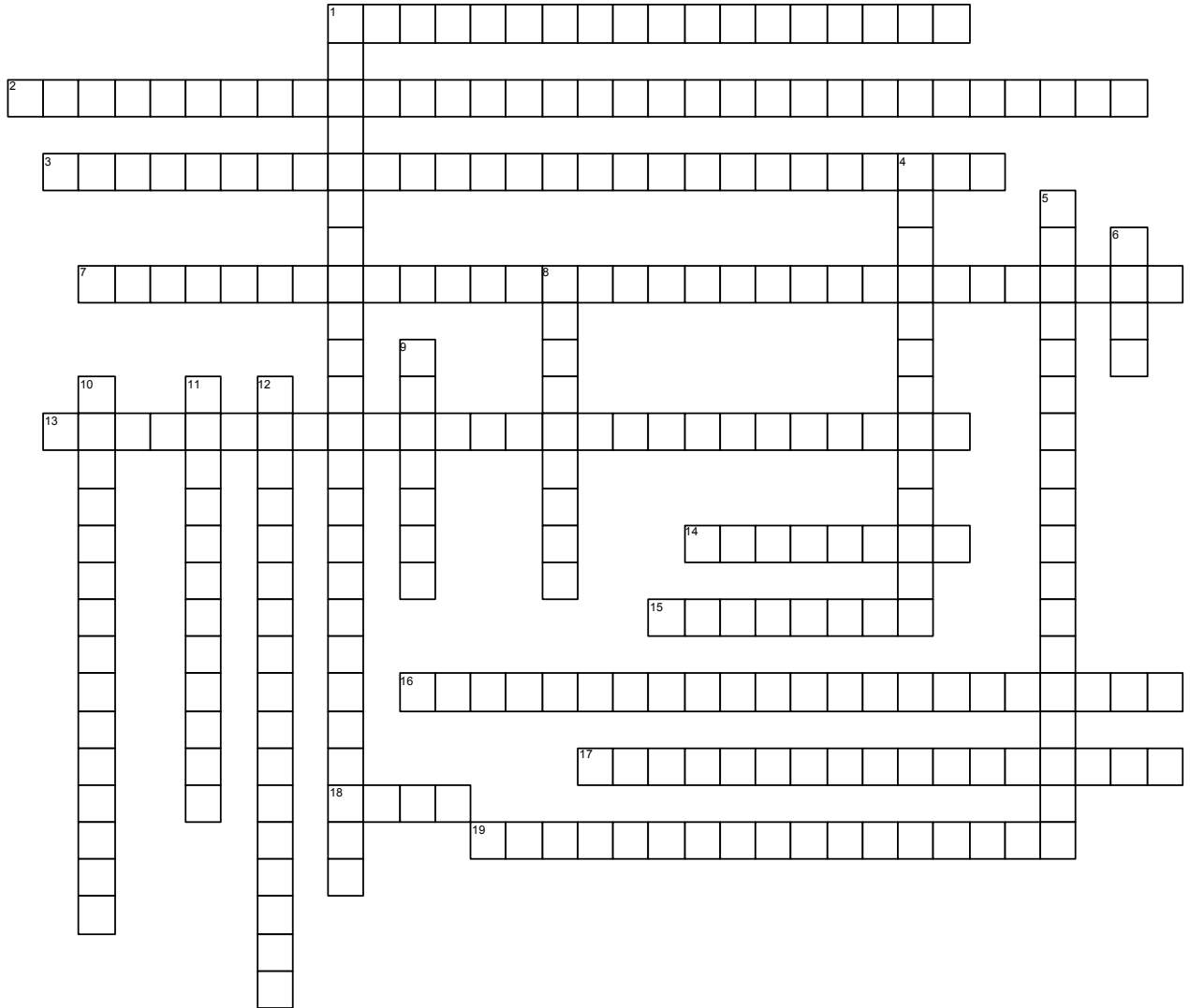
3 \_\_\_\_\_ is a method used to reduce NOx emissions by injecting urea into the exhaust stream.

7 \_\_\_\_\_ are used in all light-duty diesel vehicles, since 2007.

13 The \_\_\_\_\_ has two pressure sample lines.

14 A \_\_\_\_\_ is a heating element that uses 12 volts from the battery and aids in the starting of a cold engine by providing heat to help the fuel to ignite.

15 The diesel fuel is \_\_\_\_\_



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usually drawn from the fuel tank by a separate pump, called a \_\_\_\_\_ and delivers the fuel to the injection pump.

16 Newer diesel engines use a fuel delivery system referred to as a \_\_\_\_\_

\_\_\_\_\_ design. 17 In an \_\_\_\_\_ diesel engine, fuel is injected into a small prechamber, which is connected to the cylinder by a narrow opening.

18 Another name for \_\_\_\_\_

particulate matter is \_\_\_\_\_.

19 \_\_\_\_\_ refers to tiny particles of solid or semisolid material suspended in the atmosphere.

### DOWN

1 \_\_\_\_\_

\_\_\_\_\_ are used in all light-duty diesel engines, since 2007.

4 A diesel engine uses a fuel system with a precision \_\_\_\_\_ and individual fuel injectors.

5 Between the fuel tank and \_\_\_\_\_

the lift pump is a \_\_\_\_\_.

6 \_\_\_\_\_ is used as nitrogen fertilizer.

8 A \_\_\_\_\_ is a device used for checking a diesel injector nozzle for proper spray pattern.

9 \_\_\_\_\_ means the \_\_\_\_\_

percentage of light that is blocked by the exhaust smoke.

10 In a \_\_\_\_\_ diesel engine, fuel is injected directly into the cylinder.

11 The process of purging soot from the DPF is described as \_\_\_\_\_

12 Incoming air is compressed until its temperature reaches about 1,000°F (540°C) and is called \_\_\_\_\_

\_\_\_\_\_