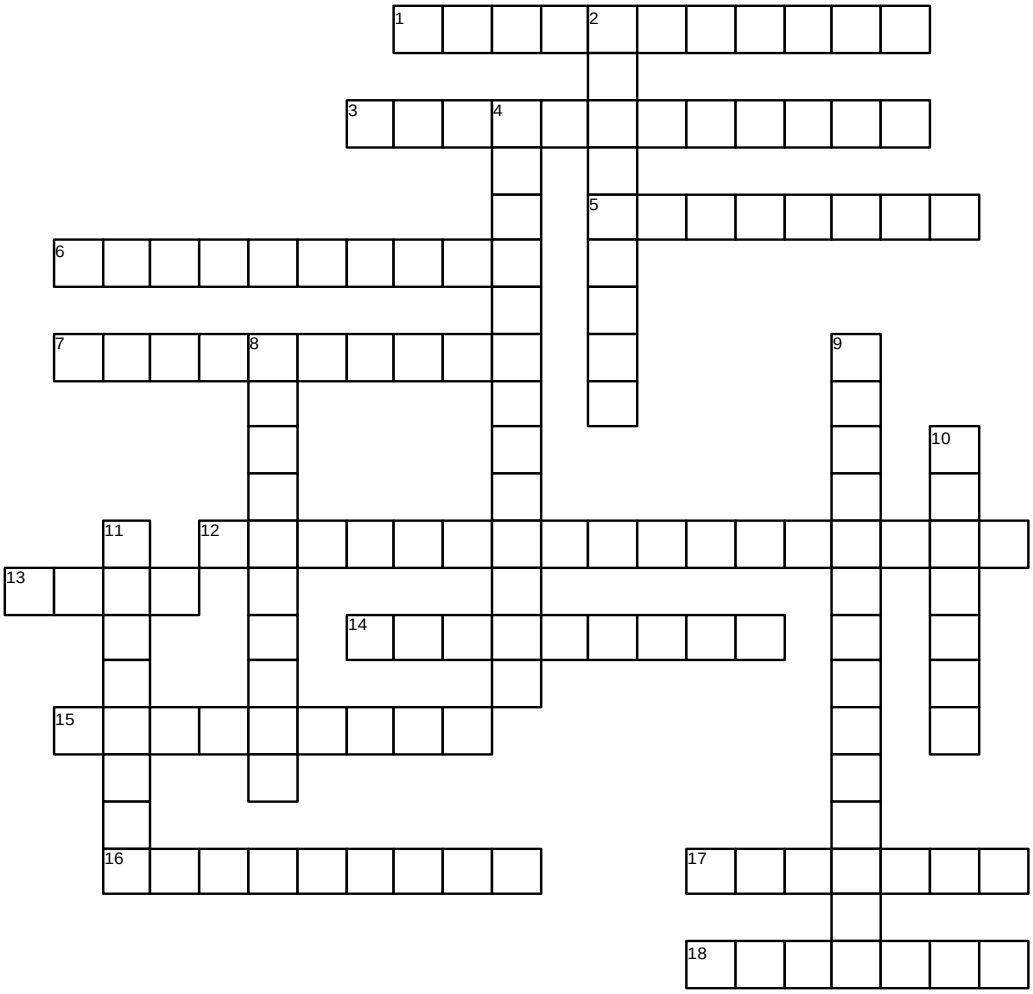
Diesel Engine Cooling System

Chapter 5



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ACROSS

1 _____ is a chemical reaction that takes place between coolant additives and the metal that

3 the _____ spring operates a valve that allows the fan to freewheel when the radiator is cool.

5 _____ activity is the flow of an electrical current as the result of two different metals in an acidic or alkaline liquid, which acts like a battery.

6 is a tester that measures the density of the coolant.

7 An _____ thermostat uses a wax pellet to open and a spring to close it, but it also uses an electric heater controlled by the PCM to accurately control engine coolant temperature.

12 This coolant has a small amount of a substance that makes it taste bitter, and therefore, not appealing to people or animals

13 _____ is a newer variation of OAT technology using organic acid salts (carboxylates) that are not abrasive to water pumps, yet provide the correct pH.

14 a _____ Is a centrifugal pump that can move a large volume of coolant without increasing the pressure of the coolant.

15 _____ are used to transfer the heat in the coolant to the outside air.

16 some vehicles use a _____ ____, which is located at the highest level of the cooling system and holds about 1 quart (1 liter) of coolant.

17 _____ is a brand of OAT coolant, which has been used in General Motors vehicles since e 1996.

18 _____ is a mixture of water and antifreeze.

DOWN

2 _____ additive technology is conventional coolant that has been used for over 50 years. Most conventional green antifreeze contains inorganic salts.

4 _____ a tester used to test the freezing point of coolant by placing a few drops of coolant on a prism surface.

8 A _____ is a device that controls coolant temperature.

9 _____ based coolant is a coolant that consists of 47% ethylene glycol, 50% water, and 3% additives.

10 engine operating temperatures must be above a _____ temperature for proper engine operation.

11 Coolant flows through the engine coolant _____, where it picks up heat. it then flows to the radiator, where the heat is given up to the outside air.