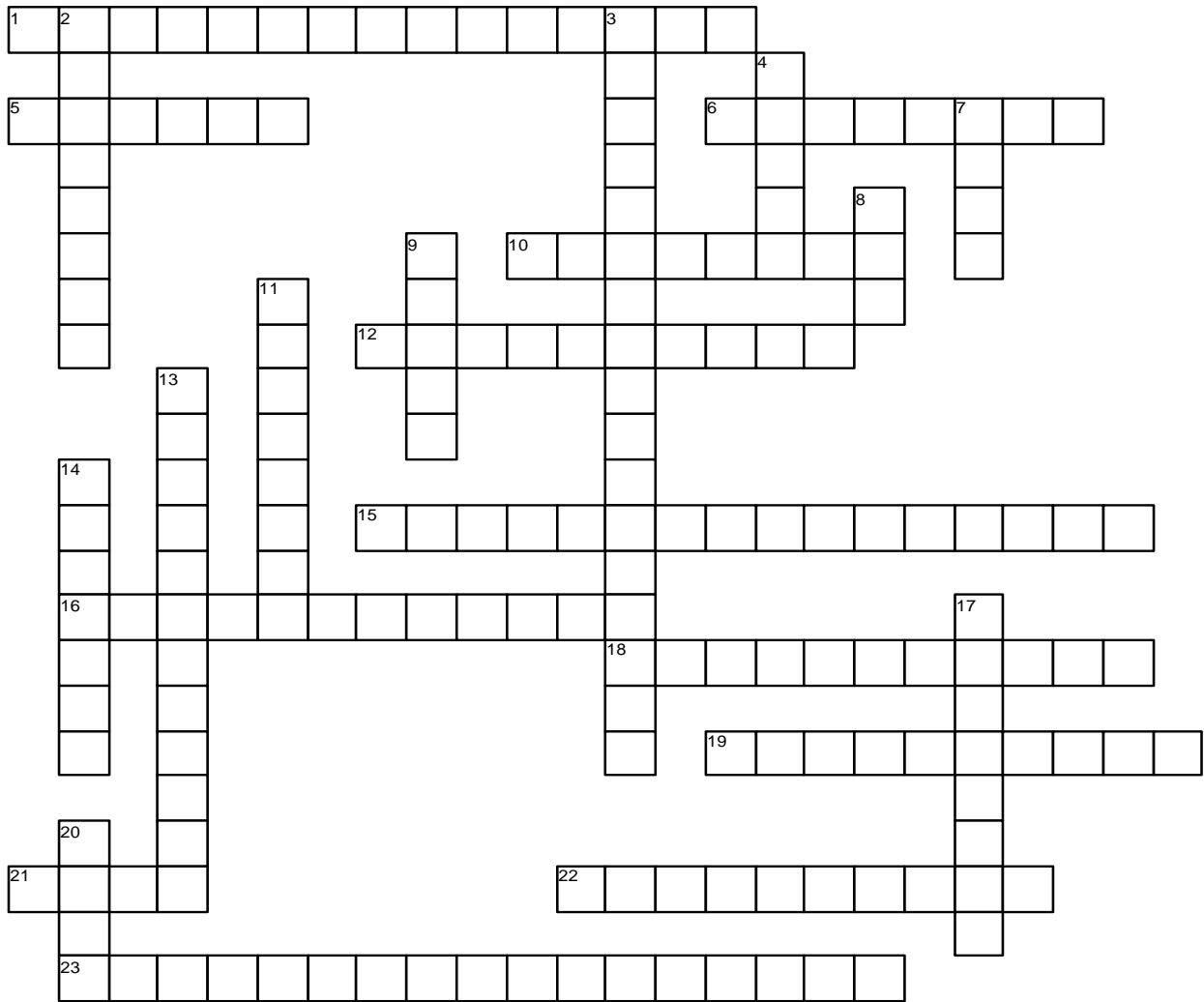


Diesel Engine Operation

Chapter 1



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ACROSS

- 1 In a diesel engine where fuel is injected directly into the cylinder is called _____.
- 5 The _____ of an engine is the distance the piston travels from top dead center (TDC) to bottom dead center (BDC).
- 6 A hole in an engine block where a piston is installed.
- 10 An _____ valve is where the camshaft is in the block and the valves are located in the cylinder head.
- 12 A _____ cycle consist of intake, compression, power, and exhaust.
- 15 The ratio of the difference in the cylinder volume when the piston is at the bottom of the stroke to the volume in the cylinder above the piston when the piston is at the top of the stroke.
- 16 _____ is the cubic inch (cu. in.) or cubic centimeter (cc) volume displaced, or how much air is moved by all of the pistons.
- 18 An _____ is used to allow air into the combustion chamber in a diesel engine.

- 19 A process where chemical energy in fuel is converted to heat energy by the burning of the fuel at a controlled rate.
- 21 The diameter of a cylinder is called the _____ and is measured in inches or millimeters (mm).
- 22 A cast or forged shaft that converts the reciprocal motion of the pistons to rotary motion.
- 23 A power chamber where the chemical energy of the diesel fuel is converted into heat.

DOWN

- 2 An engine where combustion occurs above the piston is called an _____ combustion engine.
- 3 Used in older diesel engines, fuel is injected into a small pre-chamber, which is connected to the cylinder by a narrow opening. This design is called an _____ diesel engine.
- 4 A term used to express the repeating movement of the piston through 4-strokes

equals one cycle.

- 7 When two overhead camshafts are used, the design is called a double overhead camshaft abbreviated _____.
- 8 The piston position when it is at the bottom of the stroke abbreviated _____.
- 9 All automotive and truck engines are constructed using a solid frame, called an engine _____.
- 11 An engine that burns fuel outside of the engine itself, such as a steam engine is called an _____ combustion engine.
- 13 An _____ opens to allow exhaust gases to escape the combustion chamber.
- 14 _____ center is when the piston is at the very top of either the compression or exhaust stroke.
- 17 A steel or cast iron shaft that has lobes designed to open and close intake and exhaust valves is called _____.
- 20 When only one overhead camshaft is used, the design is called a single overhead camshaft abbreviated _____.