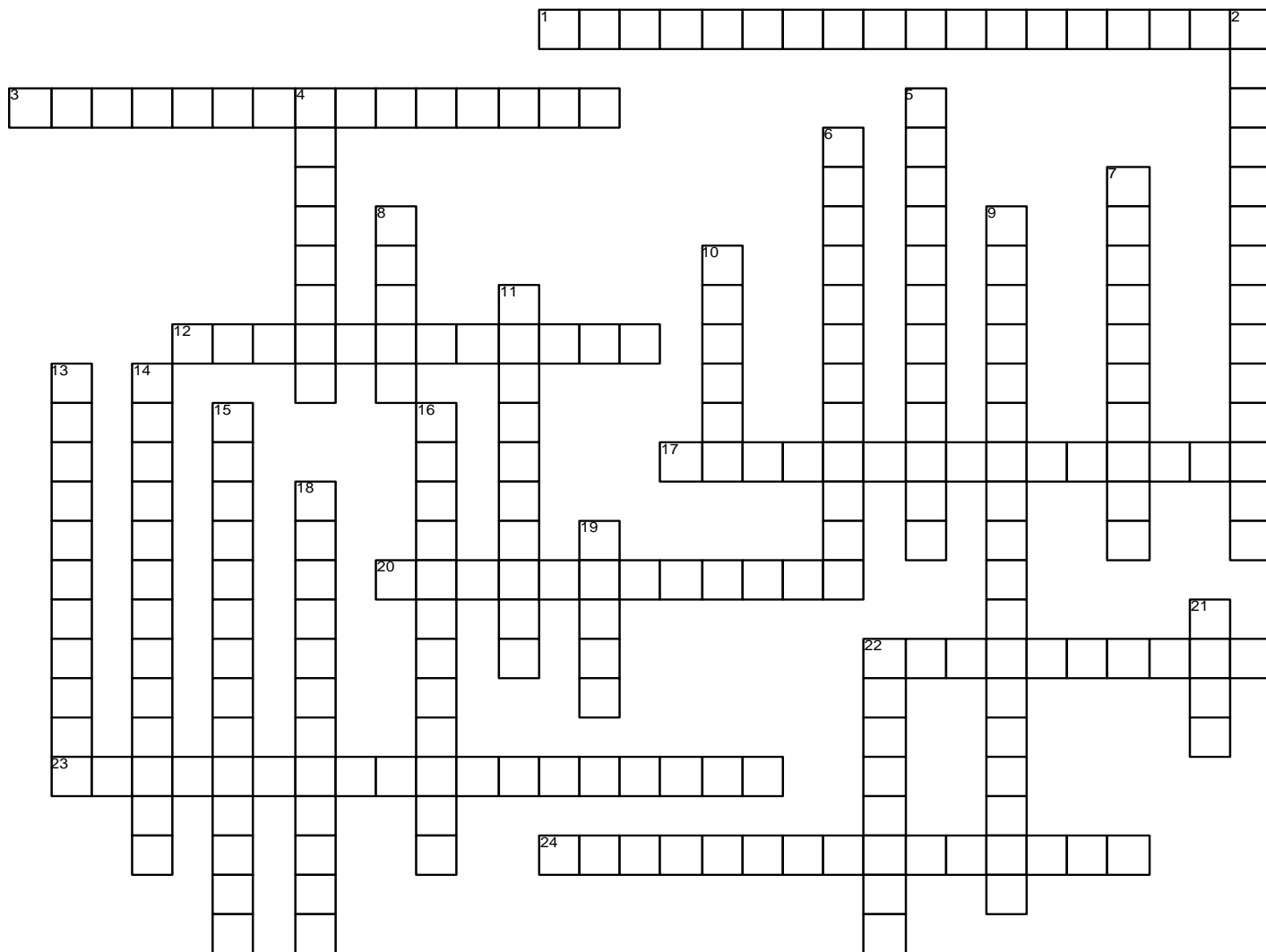


# Gasoline Engine Operation, Parts And Specifications

## Chapter 9



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### ACROSS

- 1 If atmospheric pressure is used to force the air-fuel mixture into the cylinders, the engine is called \_\_\_\_\_.
- 3 The \_\_\_\_\_ of the engine is generally referred to as the front of the engine, where the accessory belts are used.
- 12 Some engines use a turbocharger or \_\_\_\_\_ to force the air-fuel mixture into the cylinder for even greater power.
- 17 The pressure developed within the combustion chamber is applied to the head of a piston to produce a usable \_\_\_\_\_.
- 20 A successful alternative engine design is the \_\_\_\_\_.
- 22 Engines convert the chemical energy of the gasoline into heat within a power chamber that is called a \_\_\_\_\_ chamber.

- 23 An \_\_\_\_\_ engine burns fuel outside of the engine itself, such as a steam engine.
- 24 Mechanical force is converted into useful \_\_\_\_\_.

### DOWN

- 2 When two overhead camshafts are used, the design is called a \_\_\_\_\_ camshaft design.
- 4 The piston moves up and down in the \_\_\_\_\_.
- 5 Another name for the rotary engine is the \_\_\_\_\_.
- 6 The \_\_\_\_\_ opens, and the piston forces the residual burned gases out of it and into the exhaust manifold and exhaust system.
- 7 The first \_\_\_\_\_ cycle engine was developed by German engineer, Nickolaus Otto, in 1876.
- 8 All automotive and truck engines

are constructed using a solid frame, called a \_\_\_\_\_.

- 9 If engine combustion occurs within the power chamber, the engine is called an \_\_\_\_\_ engine.
- 10 The \_\_\_\_\_ of an engine is the distance the piston travels from top dead center to bottom dead center.
- 11 The piston is attached to the \_\_\_\_\_ with a connecting rod.
- 13 The \_\_\_\_\_ is open and the piston inside the cylinder travels downward, drawing a mixture of air and fuel into the cylinder.
- 14 The crankshaft rotates 180 degrees from \_\_\_\_\_ to bottom dead center and the camshaft rotates 90 degrees.
- 15 When one overhead camshaft is used, the design is called a \_\_\_\_\_ camshaft

design.

- 16 A \_\_\_\_\_ is a one-way piston movement either from top to bottom or bottom to top of the cylinder.
- 18 The flywheel end of the engine is the end to which the power is applied to drive the wheels and is called the \_\_\_\_\_.
- 19 A \_\_\_\_\_ is a complete series of events that continually repeats.
- 21 The diameter of a cylinder is called the \_\_\_\_\_.
- 22 The valves are opened by a \_\_\_\_\_.