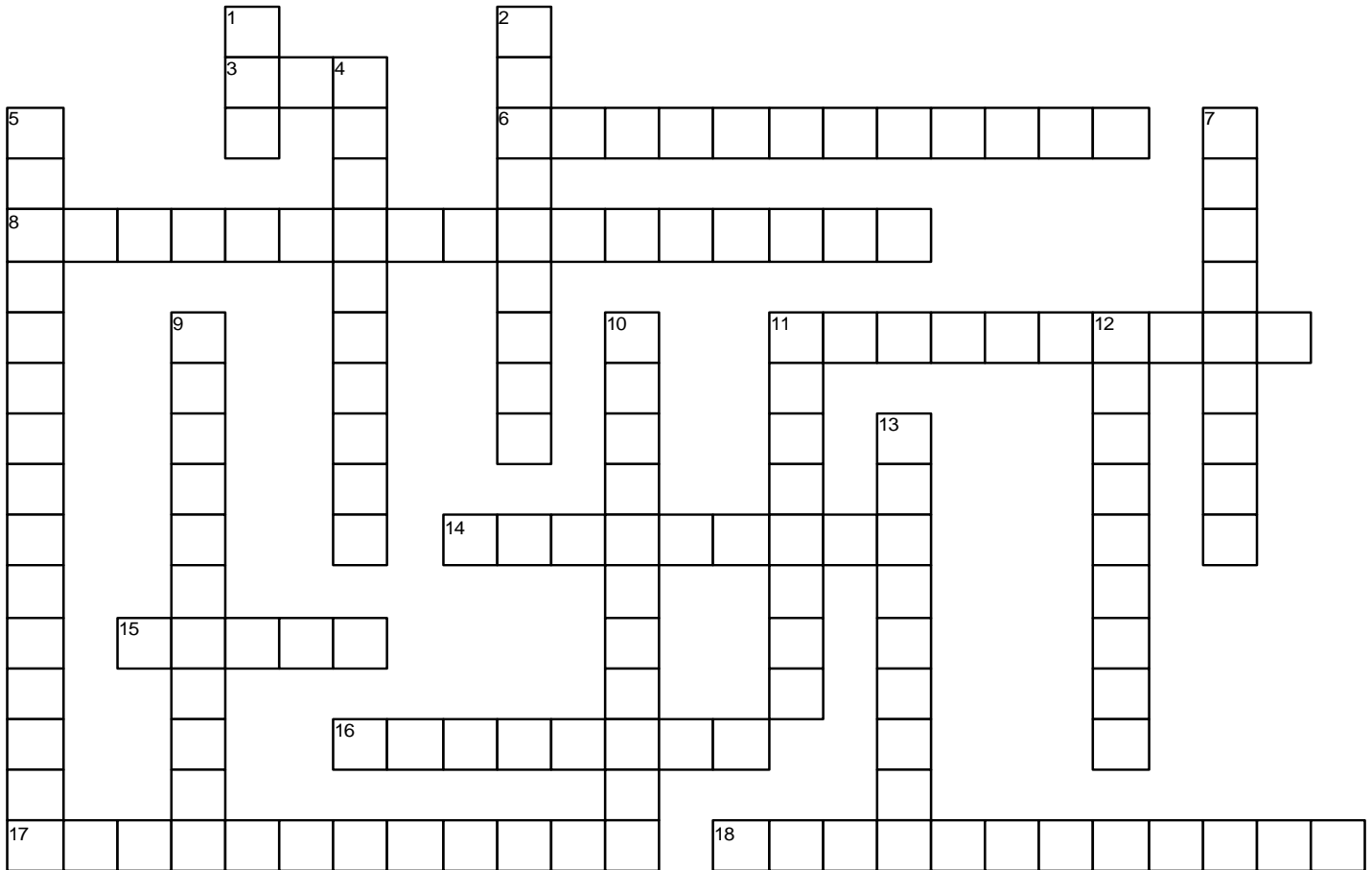


Turbocharging And Supercharging

Chapter 22



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ACROSS

- 3 The ___ features an adjustable spring design that keeps the valve closed until a sudden release of the throttle.
- 6 A _____ uses the heat of the exhaust to power a turbine wheel and therefore does not directly reduce engine power.
- 8 The _____ was patented in 1860 as a type of water pump to be used in mines.
- 11 A _____ is a device or system added to an engine, such as a supercharger, turbocharger, or nitrous oxide, to increase power.
- 14 The _____ involves additional fuel being injected.
- 15 When air is pumped into the cylinder, the combustion chamber receives an increase of air pressure known as _____, and can be measured in PSI.
- 16 The delay between acceleration and turbo boost is called _____.
- 17 _____ is a colorless, nonflammable gas.
- 18 A _____ is an engine-driven air pump that supplies more than the normal amount of air into the intake manifold and boosts engine torque and power.

DOWN

- 1 A ___ is a type of relief valve that routes the pressurized air to the inlet side of the turbocharger for reuse and is quiet during operation.
- 2 An engine that uses atmospheric pressure for its intake charge is called a _____ aspirated engine.
- 4 _____ efficiency is a measure of how well an engine breathes.
- 5 _____ systems use an air pump to pack a denser air-fuel charge into the cylinders.
- 7 A _____ is a valve similar to a door that can open and close.
- 9 An _____ is similar to a radiator, wherein outside air can pass through, cooling the pressurized heated air.
- 10 Many factory installed superchargers are equipped with a _____ that allows intake air to flow directly into the intake manifold, bypassing the supercharger.
- 11 The roots-type supercharger is called a _____ displacement design, because all of the air that enters is forced through the unit.
- 12 In a _____, such as an engine using port fuel injection, only nitrous oxide needs to be injected because the PCM can be commanded to provide more fuel when the N2O is being sprayed.
- 13 A _____ is also called a blow-off valve or vent valve.