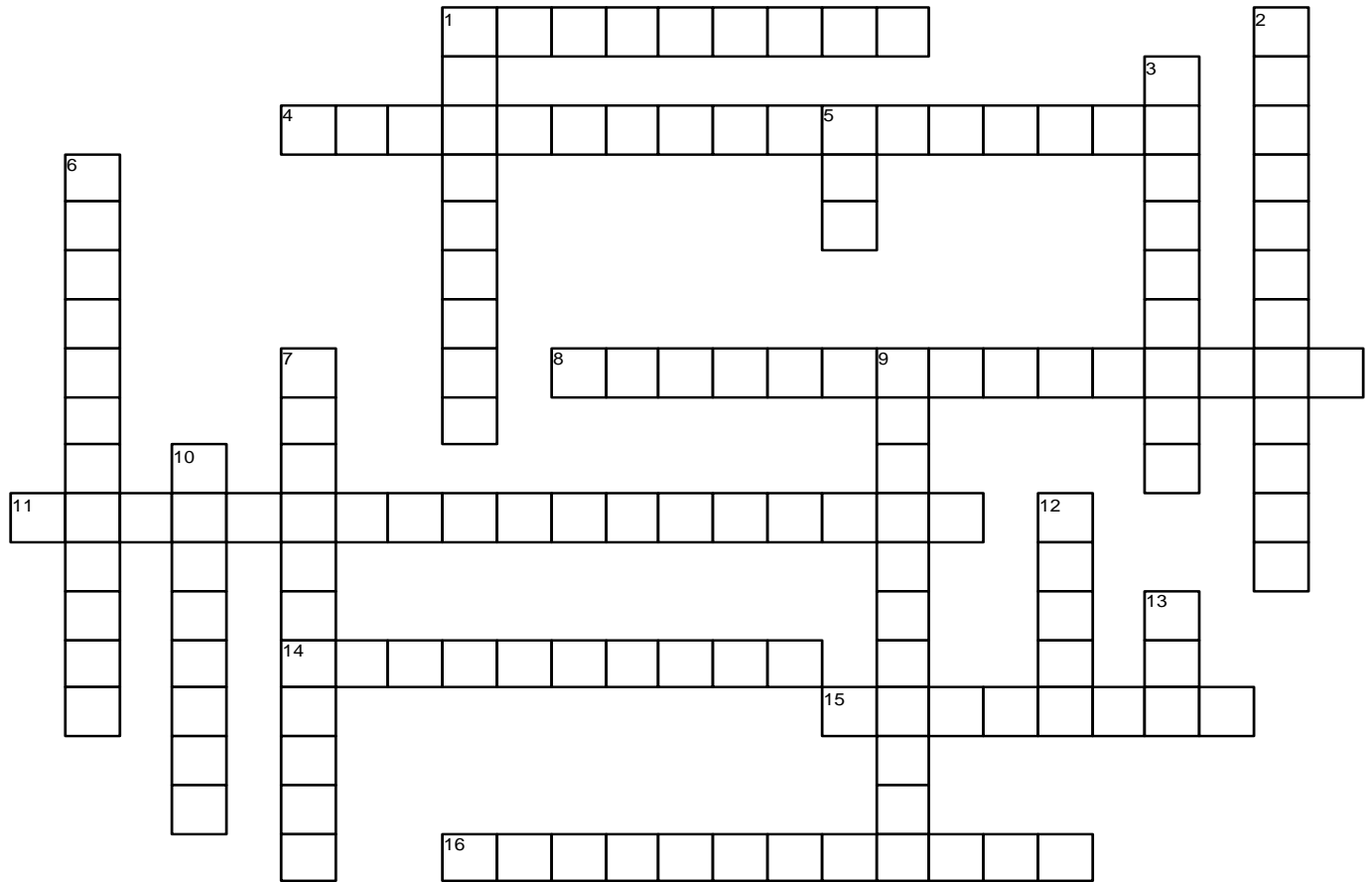


Turbocharging And Supercharging

Chapter 12



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ACROSS

- 1 A _____ is a valve similar to a door that can open and close.
- 4 The _____ was patented in 1860 as a type of water pump to be used in mines.
- 8 _____ systems use an air pump to pack a denser air-fuel charge into the cylinders.
- 11 An engine that uses atmospheric pressure for its intake charge is called a _____ engine.
- 14 _____ efficiency is a measure of how well an engine breathes.
- 15 The roots-type supercharger is called a _____ displacement design, because all of the air that enters is forced through the unit.
- 16 A _____ uses the heat of the exhaust to power a turbine wheel and therefore does not directly reduce engine power.

DOWN

- 1 The _____ involves additional fuel being injected.
- 2 _____ is a colorless, nonflammable gas.
- 3 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.
- 5 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.
- 6 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.
- 7 Many factory installed superchargers are equipped with a _____ that allows intake air to flow directly into the intake manifold, bypassing the supercharger.
- 9 An _____ is similar to a radiator, wherein outside air can pass through, cooling the pressurized heated air.
- 10 The delay between acceleration and turbo boost is called _____.
- 12 When air is pumped into the cylinder, the combustion chamber receives an increase of air pressure known as _____, and can be measured in PSI.
- 13 The _____ features an adjustable spring design that keeps the valve closed until a sudden release of the throttle.