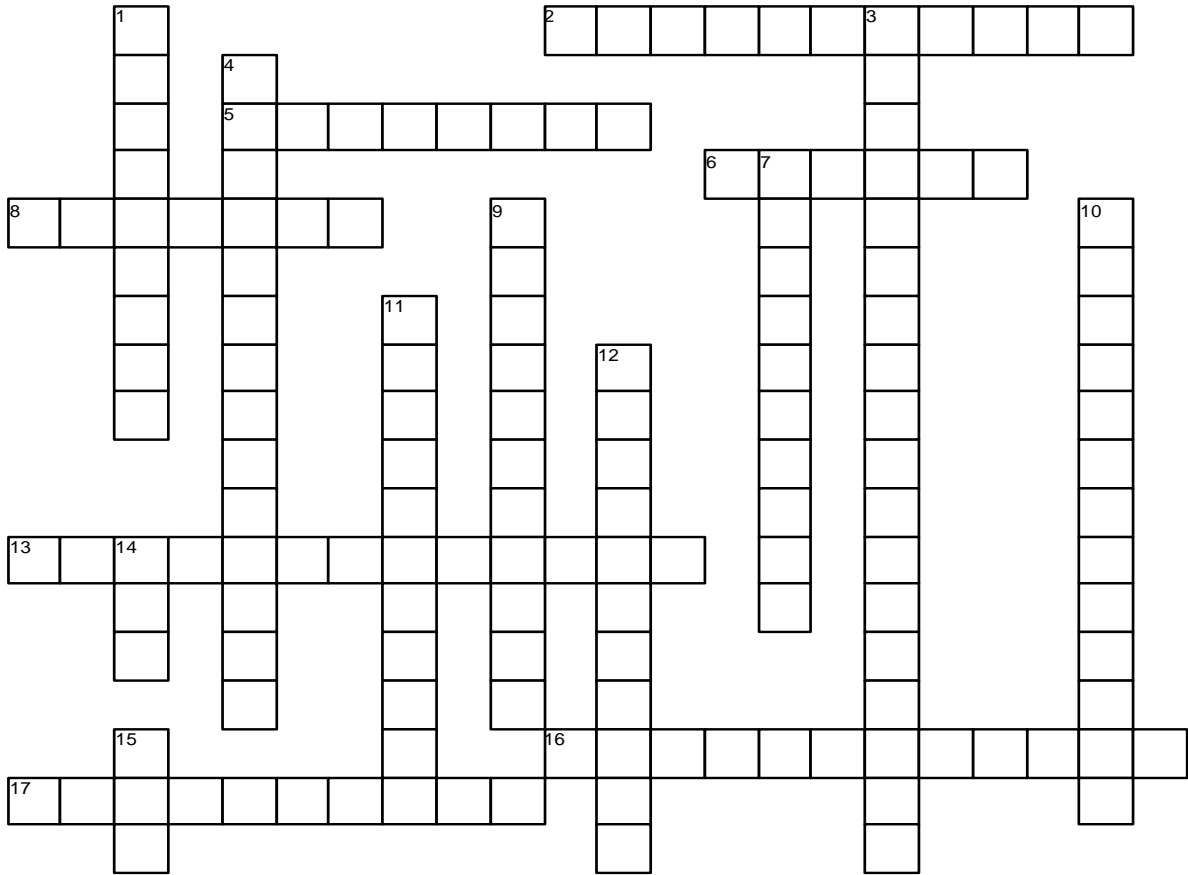


# Low-Voltage Batteries and Stop/Start Micro Hybrids

## Chapter 9



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### ACROSS

- 2 The \_\_\_\_\_ battery sensor is used to measure battery voltage, current, and SOC.
- 5 One test to determine the condition of any 12-volt battery is the \_\_\_\_\_.
- 6 \_\_\_\_\_ hour is an older battery rating system that measures how many amperes of current the battery can produce over a period of time.
- 8 The \_\_\_\_\_ capacity rating for batteries is the number of minutes for which the battery can produce 25 amperes and still have a battery voltage of 1.75 volts per cell (10.5 volts for a 12-volt battery).
- 13 The \_\_\_\_\_ module is responsible for controlling the electric portion of the powertrain.
- 16 The \_\_\_\_\_ control module (TCM) monitors the range selector switch to determine what gear the driver has selected.
- 17 An \_\_\_\_\_ means starting, lighting, and ignition, and describes the use of a typical automotive battery.

### DOWN

- 1 \_\_\_\_-\_\_\_\_ systems can be categorized as either mild or micro hybrids based on their design and operating voltage.
- 3 The main feature of either design is the idle-stop mode, in which the \_\_\_\_\_ engine (ICE) is stopped, rather than idling while stopped in traffic.
- 4 An \_\_\_\_\_ delivers a quick burst of energy during peak power demands.
- 7 A \_\_\_\_\_ utilizes a stop-start system that operates on a voltage that is greater than normal system voltage.
- 9 The \_\_\_\_\_ module (BCM) monitors the operation of the climate control system as well as the driver's door switch and driver's seat belt.
- 10 The \_\_\_\_\_ module (ECM) is responsible for all engine control systems when the engine is running.
- 11 The \_\_\_\_-\_\_\_\_ battery will be either nickel metal hydride or lithium-ion construction.
- 12 A \_\_\_\_\_ utilizes a stop-start system that operates on a 12-volt system and does not contain any high-voltage components.
- 14 The belt alternator starter abbreviated \_\_\_\_ system was the most common early stop-start system.
- 15 \_\_\_\_ stands for Japanese Industrial Standard.