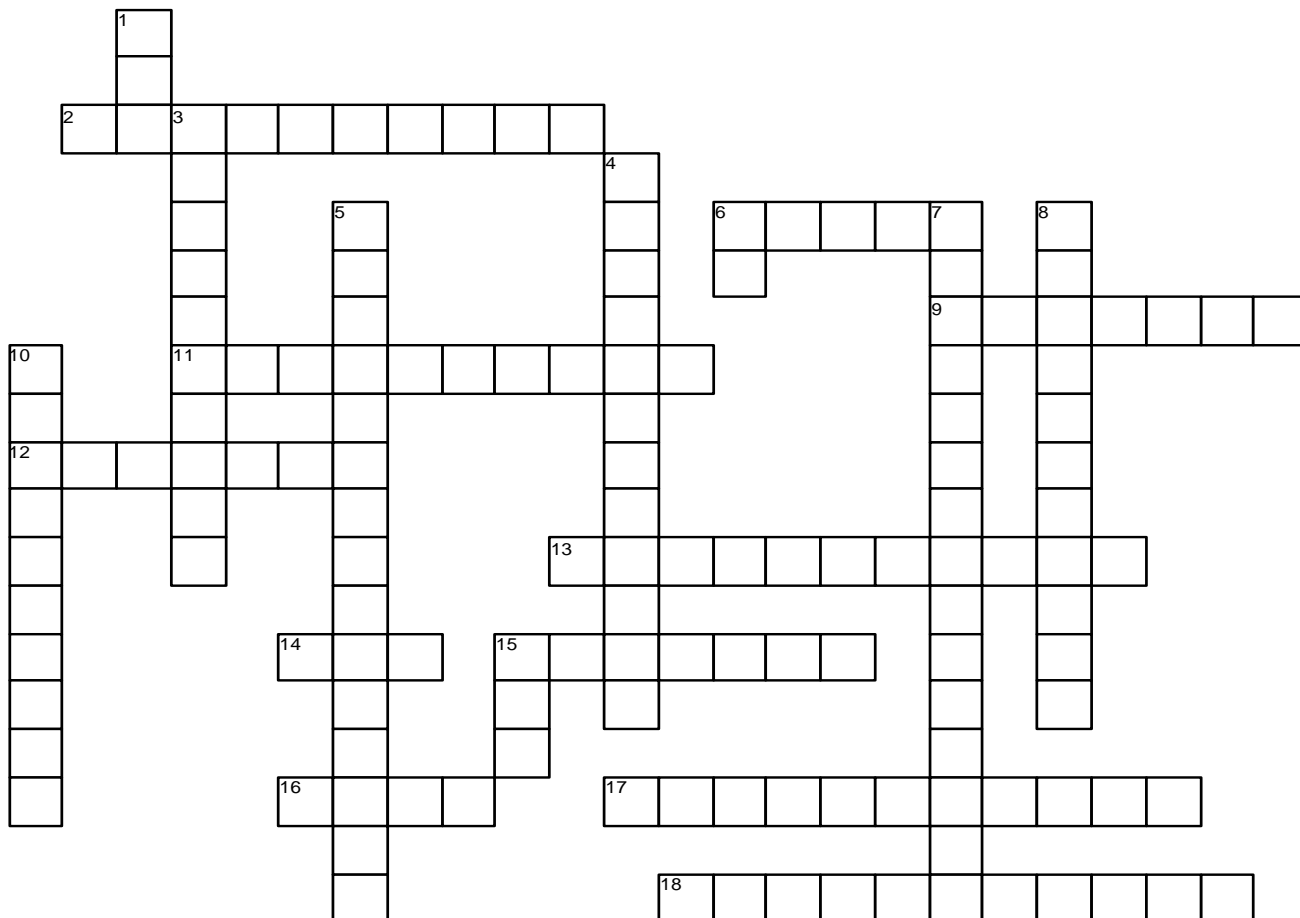


# Automotive 12-Volt Batteries

## Chapter 47



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### ACROSS

- 2 \_\_\_\_\_ is an older battery rating system that measures how many amperes of current the battery can produce over time.
- 6 \_\_\_\_\_ are constructed of positive and negative plates with insulating separators between each plate.
- 9 Another name for a cell is an \_\_\_\_\_.
- 11 \_\_\_\_\_ is a pure porous lead.
- 12 The \_\_\_\_\_ capacity rating for batteries is the number of minutes that the battery can produce 25 amperes and still have a battery voltage of 1.75 volts per cell.
- 13 Conventional batteries use a liquid
- 14 Battery sizes are standardized by the \_\_\_\_\_.
- 15 \_\_\_\_\_ is the release of hydrogen and oxygen from the battery that occurs during charging and results in water usage.
- 16 Each positive and negative plate in a battery is constructed on framework, or \_\_\_\_\_, made primarily of lead.
- 17 Both types of valve-regulated, lead-acid batteries are also called \_\_\_\_\_ battery design.
- 18 \_\_\_\_\_ is almost fully discharging a battery and then completely recharging it.

### DOWN

- 1 The acid used in an \_\_\_\_\_ battery is totally absorbed into the separator, making the battery leakproof and spillproof.
- 3 The negative plates are pasted to the grid with a pure \_\_\_\_\_.
- 4 Another name for a maintenance-free battery is a \_\_\_\_\_-\_\_\_\_\_ battery.
- 5 A \_\_\_\_\_-\_\_\_\_\_ battery uses little water during normal service because of the alloy material used to construct the battery plate grids.
- 6 The designation \_\_\_\_\_ refers to the number of amperes that can be supplied by a battery at 32°F (0°C).
- 7 The amount of sulfate in the electrolyte is determined by the electrolyte's \_\_\_\_\_, which is the ratio of the weight of a given volume of a liquid to the weight of an equal volume of water.
- 8 \_\_\_\_\_ is the term used to describe the acid solution in a battery.
- 10 Each cell is separated from the other cells by \_\_\_\_\_, which are made of the same material as that used for the outside case of the battery.
- 15 \_\_\_\_\_ batteries are usually not used in automotive applications but instead are used in electric wheelchairs and scooters.