

Common Truck and Automotive Battery Terms

1. **Absorbent Glass Mat (AGM):** This is a separator technology that is used in some sealed, lead-acid batteries in which the glass-mat separator absorbs 100% of the electrolyte. Because of the immobilized electrolyte, an AGM battery will not leak or spill and does not require distilled water addition. This type of battery is used in deep-cycle and specialty applications such as telecommunications, wheelchairs and security systems. They are also used in automotive starting applications.
2. **Active Material:** The chemical paste that adheres to the positive (+) and negative (-) electrodes in a battery and reacts with the sulfuric acid.
3. **Alternating Current (AC):** An electric current that varies in magnitude and direction. The variation can be plotted as a Sine wave and is counted in the units of Hertz. An automotive battery does not deliver alternating current.
4. **Alternator:** An alternating current (AC) generator that produces and rectifies current so it can be used in cars and trucks.
5. **Ammeter:** An instrument that measures the flow of current in amps. Ammeters can be used to measure direct current (DC) and alternating current (AC).
6. **Amp:** This is short for ampere and it is the unit of measure for the amount of current that is flowing through a circuit.
7. **Amp-Hour (AH):** This is the unit of measure for a battery's electrical storage capacity which is obtained by multiplying the current in amps by the time in hours of discharge. For example: a battery delivering 10 amps for 30 hours = 10 amps x 30 hours = 300 amp-hours (AH).
8. **Anode:** The positive (+) terminal of an electrolyte battery.
9. **Automotive Battery:** A battery designed to start an automobile, also known as a Starting, Lighting and Ignition (SLI) battery.
10. **Battery:** A device that produces and stores electrical energy as a result of a chemical reaction. A 12-volt battery has six individual 2-volt cells that contain positive (+) plates and negative (-) plates that create electrical current. A fully charged 12-volt battery produces at least 12.66 volts.
11. **Battery Council International (BCI):** An association of battery industry companies whose members establish policy and standards for the battery industry.
12. **BCI Group Number:** The physical dimensions of a battery. BCI assigns letters and numbers for North American battery size types. For example: all group size 24 batteries have similar container dimensions, terminal orientation and terminal types.
13. **Capacity:** The ability of a fully-charged battery to deliver a specific amount of electricity (AH) at a set rate (amps) over a pre-determined time period (hours).
14. **Cathode:** The negative (-) terminal of an electrolyte battery.
15. **Cell (Flooded):** This is the basic unit that converts chemical energy directly into electric energy. It typically consists of a set of positive (+) plates, negative (-) plates, liquid electrolyte, separators and a casing. 12-volt flooded cell batteries have six cells.

16. **Cold Cranking Amps (CCA):** A rating used to define the battery's ability to start an engine under low temperature conditions. BCI defines it as the number of amps a lead-acid battery at 0° F can deliver for 30 seconds and maintain at least 1.2 volts per cell, which equals 7.2 volts for a 12-volt lead-acid battery.
17. **Corrosion:** A destructive chemical reaction with a reactive metal that forms a new compound. Saltwater or dilute sulfuric acid on steel forms the corrosion compound rust. Battery terminals are subject to corrosion.
18. **Cranking Amps (CA):** A rating used to define the battery's ability to start an engine under moderate temperature conditions. BCI defines it as the number of amps a lead-acid battery at 32° F can deliver for 30 seconds and maintain at least 1.2 volts per cell, which equals 7.2 volts for a 12-volt lead-acid battery. Cranking amps should never be confused with cold cranking amps.
19. **Cycling:** The repeated charge/discharge cycle of a battery. Some batteries are rated according to their ability to cycle.
20. **Deep-Cycle Battery:** A battery that is designed to withstand repetitive discharges to a 20% depth of discharge or more, and to continue providing its rated capacity after hundreds of cycles. Deep-cycle batteries are often used in RV/marine and industrial applications.
21. **Direct Current (DC):** An electrical current that flows in one direction only. A battery delivers direct current, discharging the battery and is recharged with direct current.
22. **Distilled Water:** Water that has many of its impurities removed through distillation, which involves boiling the water and condensing the steam into a clean container. If the water level in your battery is low, most battery manufacturers recommend adding nothing but distilled water. Other additives such as tap water contain minerals that can actually harm batteries.
23. **Electrolyte:** The diluted solution of approximately 25% sulfuric acid (H₂SO₄) and 75% water by volume in a lead-acid battery. Electrolyte conducts electricity required for the battery to supply energy. A lead-acid battery may have a liquid, gelled or immobilized electrolyte.
24. **Flooded Battery:** A type of liquid, lead-acid battery in which the gaseous products of electrolysis and evaporation, typically hydrogen and oxygen, are allowed to escape into the atmosphere. This type of battery can also be referred to as a vented battery.
25. **Gassing:** The production of gas in a battery due to the chemical reaction during recharging.
26. **Gel-Cell Battery:** A recombinant-chemistry, lead-acid battery in which the electrolyte is immobilized by adding a gelling agent. Totally sealed and valve-regulated, it is non-spillable and does not require distilled water addition.
27. **Heavy-Duty Battery (Commercial):** A lead-acid, liquid-electrolyte, starting battery used in medium and heavy-duty trucks.
28. **Hertz:** A unit of frequency equal to one cycle per second.

29. **Hot Cranking Amps (HCA):** A rating similar to CCA that is used to define the current output of a battery at 80° F.
30. **Hydrometer:** An instrument used to determine the state of charge of a battery by measuring the specific gravity of its electrolyte. This can be a mechanical float type or electronic.
31. **Key-off Drain:** An electrical discharge that can be caused by a vehicle computer memory or alarm system that draws power from the battery when the vehicle is not running.
32. **Lead-Acid Battery:** A battery with an active material of lead and lead peroxide and with an electrolyte solution of water and sulfuric acid. Maintenance-free, low-maintenance and gel-cell batteries are types of lead-acid batteries.
33. **Low-Maintenance Battery:** A lead-acid battery that may require periodic distilled water addition under normal operating conditions.
34. **Maintenance-Free Battery:** A battery that does not require distilled water addition under normal operating conditions. This can be referred to as a sealed battery.
35. **Recombinant:** The process in which the oxygen formed at the positive (+) plate diffuses to the negative (-) plate, reacts with the lead and suppresses water loss. In a recombinant (immobilized electrolyte) battery, gassing is recombined within the sealed battery so that distilled water addition is unnecessary.
36. **Reserve Capacity:** The Battery Council International (BCI) defines this as the number of minutes a new, fully-charged battery at 80° F can be discharged at 25 amps and maintain a voltage equal to or higher than 1.75 volts per cell. This rating represents the time the battery will continue to operate essential accessories in the event of a charging system failure.
37. **Specific Gravity:** In a lead-acid battery it's the weight of sulfuric acid compared to the weight of an equal volume of pure water.
38. **Sulfation:** The accumulation of lead sulfates on the plates of a lead-acid battery. When enough plate area has sulfated, the battery will not be able to provide enough current and will need to be replaced.