

## BATTERY Q&A

### How does a battery work?

A battery stores energy in chemical form that can be released on demand as electricity. This electrical power is used by the car's ignition system for cranking the engine. The car's battery also may power the lights and other accessories. Should the alternator or alternator belt fail, the battery might also need to power the vehicle's entire electrical system for a short period of time.

### When my car won't start, how do I know for sure if my battery needs to be replaced?

Many other problems can keep a car from starting, so you need to do some troubleshooting. Most automotive parts suppliers will test your battery free of charge. Please also see our video "How to Troubleshoot a Starter Problem" at: [http://www.youtube.com/watch?v=0mKrx-fMi\\_8](http://www.youtube.com/watch?v=0mKrx-fMi_8)

### What should I consider when buying a battery?

**SIZE:** Using a battery that is not the same dimensions as the original will make it difficult to secure properly. One of the most common causes for battery failures is vibration. **POWER:** Be sure to pick a battery with the same or higher rating (usually CCA) as the original. A lower rating will not provide the required power to operate your car properly and will usually result in an electrical system failure.

### When I am disconnecting a battery, why is it important to remove the ground cable first?

If you remove the positive connector first you risk the chance of creating a spark. That could happen if the metal tool you're using to remove the positive terminal connector comes in contact with any piece of metal on the car. If you are working near the battery when this occurs, it might create an ignition source that could cause the battery to explode. It's extremely important to remove the ground cable first.

### Can Excessive heat damage a battery?

Hot temperatures will deteriorate a battery's life quicker by evaporating the water from the electrolyte solution and corroding and weakening the positive grids.

### What is CCA?

Cold Cranking Amps is a rating used in the battery industry to define a battery's ability to start an engine in cold temperatures. The rating is the number of amps a new, fully charged battery can deliver at 0° Fahrenheit (-18°C) for 30 seconds, while maintaining a voltage of at least 7.2 volts, for a 12 volt battery or 1.20 volts per cell. The higher the CCA rating, the greater the starting power of the battery.

### What are MCA or CA rates?

This is a rating used to describe the discharge load in amperes which a new, fully charged battery at 32° Fahrenheit (0°C), can continuously deliver for 30 seconds and maintain a terminal voltage equal or greater than 1.20 volts per cell or 7.2 volts for a 12 volt battery. It is sometimes referred to as Marine Cranking Amps or Cranking Amps.

### What is reserve capacity?

Reserve capacity (RC) is a battery industry rating, defining a battery's ability to power a vehicle with an inoperative alternator or fan belt. The rating is the number of minutes a battery at 80° Fahrenheit (26.6°C) can be discharged at 25 amps and maintain a voltage of 10.5 volts for a 12 volt battery.