

Why a Brand-New Automotive Lead Acid Battery May Show Lower CCA Than Its Rated Value ?

Even a brand-new lead-acid battery that has never been used may show a lower Cold Cranking Amps (CCA) value when measured by an electronic tester.

The main reasons include:

1. **Incomplete plate activation** – The plates may not be fully formed or stabilized after the factory formation process, resulting in slightly lower conductivity in the initial state.
2. **Minor sulfation during storage** – When stored for a long period, slight lead sulfate crystals may form on the plate surfaces, reducing instantaneous discharge capability.

To ensure the battery reaches its optimal performance before installation, it is recommended to perform a charge to activate the battery.

This process allows the active material on the plates to better convert and the electrolyte to mix more evenly.

Sometimes it will take a few charging cycles to reach its optimum performance.

If the new battery is installed directly into the vehicle, the alternator will gradually activate it during regular driving. It may take weeks or a month of driving(charging) to fully activate the battery, depending on the driving distance/time.