

Battery Guide

Car Battery Warning Signs:

1. Slow Engine Crank
2. Issues with electrical components
3. Dashboard Warning Light
4. Swollen Battery Case
5. Old Age
6. Strange Smell

Step-by-Step Guide to Changing a Car Battery

Removing a Battery

Step 1: Check your vehicle owner's manual for the your car battery's location. Identify the positive and negative posts and the respective cables attached to each. The positive post may have a red plastic cover over it and/or the cable attached to it will be red. There should also be a "+" symbol stamped or printed on the battery, next to the positive post.

Step 2: Using a wrench, loosen the nut or bolt that secures the negative terminal and cable to the negative battery post.

Caution: When changing a car battery, don't let any metal objects touch both battery posts simultaneously. Doing so could generate sparks and cause an explosion.

Step 3: Once you loosen the bolt or nut, first use the terminal puller to remove the cable and terminal from the negative battery post. Do the same with the positive terminal.

Step 4: Remove the clamp or retaining system holding the battery in place and set the parts and fasteners aside where to avoid spilling or misplacing them.

Step 5: Carefully lift the battery out without jostling it too much (be prepared, it is slightly heavy). If the posts are located on top of the battery, as opposed to on the side, you can use the battery carrying strap.

Installing a New Battery

Step 1: Examine the terminals attached to the ends of the battery cables to ensure they're clean and corrosion-free. If they're not, clean them using the terminal-cleaning tool.

Step 2: Position the battery so that the red, positive post will match up to the positive terminal and cable's location.

Step 3: Insert the new battery. Then secure it with the clamp or retaining system removed earlier.

Step 4: Remove the plastic caps that cover the battery posts and install the anti-corrosion washers over them.

Step 5: Apply a thin layer of grease to the battery posts and terminals before connecting the positive terminal to the positive post first. Using the wrench, tighten the connector until it is snug. Then repeat for the negative post and terminal.

Step 6: Try to wiggle the battery. If it moves, tighten the clamp or retaining system.

You're finished installing a car battery. Once you're done changing your car battery, bring your old one to the authorized battery dealer for recycling.

Personal Safety

Whenever you perform a task you must use personal protective clothing and equipment that is appropriate for the task. Among other items, this may include:

- Work clothing, such as overalls and steel-capped footwear.
- Eye protection, such as safety glasses and face masks.
- Ear protection, such as earmuffs and earplugs.
- Hand protection, such as rubber gloves and barrier cream.
- Respiratory equipment, such as face masks and valved respirators.

Safety Measures

Make all connections between the battery charger and the battery that is to be charged, before connecting to the power supply or turning "ON" any switches.

- Never charge a 'frozen' battery.

- Make sure that the voltage used to charge the system never exceeds the system design while charging. For instance if you connect two 12 volt batteries in 'series' for charging you should use the 24 volt setting on the charger, however if you connect the same two batteries in 'parallel' you should only use the 12 volt setting on the charger.
- Never allow a spark or flame to get near the battery.
- Always use the markings on the battery to determine the positive and negative terminals. Never use the colour of the cables to determine the positive or negative terminals.
- Make sure that the bonnet is secured with a bonnet stay rod.
- Always make sure that you wear the appropriate personal protection equipment before starting the job. Remember that batteries contain acid and it is very easy to hurt yourself even when the most exhaustive protection measures are taken.

Important Points

- Batteries come in many sizes and power ratings, so always check the rating of the battery you are servicing. The rating provides a testing benchmark for battery performance.
- The hydrometer used to measure the specific gravity of the electrolyte must be handled carefully and safely. • Store the hydrometer in a safe receptacle before and after use. Small amounts of electrolyte in the hydrometer can leak out and damage the vehicle's paintwork.
- Do not remove electrolyte from one cell to another when testing; this will cause incorrect readings.
- Battery terminals are most commonly positioned on the top of each end of the battery casing but because of fitting and location arrangements, some vehicle manufacturers use batteries that have side terminals.