



Benefits of Recycling Car Batteries

While sulfuric acid and lead may not be the first substances that come to mind when envisioning the word *recycling*, these components of automotive batteries are as recyclable as they come.

Hazardous Waste

Automotive batteries (lead-acid batteries) are generally made up of a hard rubber or plastic case, lead and an electrolyte solution. As you can imagine, these materials in the environment pose a serious health risk. The proper disposal of, and reduction in risk of exposure to, these constituents are preeminent reasons to recycle.

The Power of Reuse

Recycling lessens the demand for virgin materials required for new products. According to Battery Council International, a typical new battery contains anywhere from **60 to 80 percent recycled plastic and lead**, reducing the overall consumption of raw materials that would be required otherwise.

Following the Rules

Complying with the rules and regulations of your local government is another compelling reason to recycle car batteries. While you may not be sentenced to hard time in the slammer, improper disposal of car batteries is no joke in the eyes of the law. With regulations in 42 states and at least one city (Kansas City, Mo.), many retailers are obligated to take back your used car battery upon the sale of a new battery (or some for a small fee). Also, many municipalities prohibit dumping batteries or placing them in general curbside pick-up.

From both environmental and cost perspectives, recycling lead-acid batteries is the logical choice. You can bring your old car batteries to JW Auto Care @ 3011 N 73rd Street in Scottsdale, AZ 85251 or use Earth911's recycling locator to find a retailer near you that accepts old car batteries. By maintaining the steady stream of incoming product, your contribution will help to keep this successful process operating for the benefit of both the Earth and the consumer.



Tips on Recycling Car Batteries

First and foremost, **do not** put automotive batteries with other household recyclables in curbside bins. There are several options for recycling car batteries instead:

- **JW Auto Care @ 3011 North 73rd Street in Scottsdale, AZ 85251** and many automotive repair shops accept dead car batteries. However, double check that they do recycle them, rather than trashing them.
- Automotive batteries can be dropped off at recycling centers that accept scrap car batteries
- The AAA Great Battery Round Up is also a perfect time to get rid of old batteries. Usually held in correspondence with Earth Day, AAA offices around the U.S. setup collection sites for dead car batteries and perform free automobile battery checks. The batteries are taken to be recycled into new batteries; some of the revenue AAA earns from recycling these batteries is given to environmental groups.

When handling dead batteries, be sure to wear gloves and safety glasses. If you are transporting the batteries to be recycled, place the battery upright in a secure, water-tight container that will not tip over; this is especially important if the battery is leaking.

Here are a few ways to extend the life of your car battery:

- When storing your car for long periods of time (weeks or months), disconnect the battery to prevent discharging.
- Check the water level in the battery every few months; it should just be touching the bottom of the refill hole





How Car Batteries are Recycled

Because of the materials that comprise a typical automotive (lead-acid) battery, there are three main “streams” in the recycling process for this particular product. Most of today’s battery cases are made of polypropylene, which is easily recycled into new plastic products. Before plastic found it’s way into the market, all batteries were made from hard rubber, the same material that makes up bowling balls.

Step One – Separate

After the obsolete batteries are collected, they are sent to a facility for sorting and processing. According to Battery Council International, the batteries are first placed in a machine called a “hammermill,” which crushes the batteries into small, nickel-size pieces. These pieces then are placed in a tank, where the dissimilar densities of the materials cause some to sink (lead), some to float (hard rubber and plastic) and liquids to go into solution (battery acid). From here, the materials are separated and treated individually.

Step Two – Lead and Plastic

The **lead** from the tank is melted in furnaces and then poured into molds called “ingot” molds. These molds can range in weight from 65 to 2,000 pounds. While the lead is still in a molten form, impurities (also known as “dross”) float to the top of the mold and are skimmed off to further purify the lead. Once the lead is cooled, it is shipped to battery manufacturers for reuse in new batteries.

After being scooped from the tank, battery **plastic** is separated from the hard rubber and recycled in a similar manner to most other plastics. It is washed and dried, then sent to a recycling facility where it is placed in an extruder. An extruder is a machine that uses heat and pressure to melt plastic. The plastic is cut into homogeneous pellets and sent to be made again into new batteries. Rubber cases cannot be recycled, but it makes a good carbon additive in the secondary lead smelting process.

Step Three – Battery Acid

The third main material, battery acid, can be reused. This method involves adding a neutralizing agent to the acid, breaking it down into water and a salt compound. The water is then tested for cleanliness and is typically released into a public sewer system.