I'm not a bot

Tips, tricks & ideas for a better home and yard, delivered to your inbox daily. Batteries—particularly the alkaline kind—can leak over time, and when they leak inside an electronic device, they can damage the battery contacts and circuitry. The good news is that most batteries that are packaged, stored, and used properly don’t leak. According to Osarumen Igbinijesu, senior quality assurance engineer at national retailer Batteries Plus, “For leakage to occur, it is typically the result of either damage or defect.” And when a battery does leak, you can usually clean battery corrosion yourself and get your device working again. When your remote or a flashlight suddenly stops working and you open it up to see what’s wrong, you may notice a flaky, white substance encrusting the battery terminals and the contacts in the battery compartment. This corrosion is caused by a leaky battery. Through damage to the battery, manufacturing defects, or excessive heat, or even when a battery sits unused for long periods of time, pressure from gas produced inside the battery can build up and break through insulating seals. This allows the battery’s electrolyte, an aqueous solution of potassium hydroxide, to seep through the seals. When potassium hydroxide reacts with the carbon dioxide in the air, it forms potassium carbonate, which is that familiar white crystalline substance. Potassium hydroxide is a caustic chemical that can irritate eyes and skin, so when you’re cleaning up battery corrosion, protect work surfaces and wear gloves. Glasses are a good idea, too, just in case you accidentally flick anything toward your eyes. There’s no need to go crazy: Basic precautions are sufficient. That said, avoid ingesting any of the leaked chemicals, and remember that a swallowed battery of any type always requires an immediate trip to the ER. Household batteries fall into two categories: primary (or single-use) batteries and rechargeable batteries. There are several types of batteries within each category. Of the many kinds of batteries, alkaline are the most likely to corrode. Alkaline: One of the most common and widely available household batteries; moderately priced; prone to leaking. Lithium: Long life and long shelf life; more expensive than alkaline; not prone to leaking. Zinc carbon: Inexpensive; generally used for low-power devices like clocks and remotes; tend to leak. Silver oxide: Expensive; button cell; used for watches, calculators, hearing aids, and other small devices; not prone to leaking. Zinc air: Button cell; primarily used in hearing aids; can leak if exposed to high temperatures or humidity. Lithium ion: Popular; used in laptops, smartphones, tablets, and other devices; not prone to leaking. Nickel cadmium (NiCd): Used in toys, digital cameras, and flashlights; may leak if overheated, overcharged, or damaged. Nickel metal hydride (NiMH): Wide application, including cellphones and laptops; long lived; not prone to leakage unless overcharged or damaged. Photo: istockphoto.com Bobvila.com may earn a commission from purchases made through these links. Working Time: 15 minutes Total Time: 45 minutes, including drying time Skill Level: Beginner Estimated Cost: $5, depending on supplies on hand Spread newspaper over your work surface, and put on protective gear: specifically, gloves and safety glasses. Carefully take the corroded batteries out of the battery compartment and dispose of them. Rough guidelines for disposal follow, but regulations vary by municipality, so check with your local sanitation department to find out how to dispose of batteries properly. The EPA also provides information about safe battery disposal, and check out Call2Recycle and Earth911 for drop-off sites and shipping options around the country. Alkaline and zinc-carbon batteries can usually be thrown in the regular trash, but check with your local sanitation department to see if recycling programs are available. Note that in California, all batteries are considered hazardous waste and must be taken to a hazardous waste collection event or a permanent collection center. Button cell and lithium single-use batteries typically cannot be put in the trash. Check for local recycling options. Rechargeable batteries of all types, including lithium ion, nickel cadmium, and nickel metal hydride, must be taken to a recycling center or hazardous waste collection site. Check with your local waste management provider. If storing spent or corroded batteries in between trips to the local hazardous waste collection center, Igbinijesu recommends taping battery terminals or putting each battery in an individual plastic bag to avoid the risk of sparks. Although potassium hydroxide, the substance that leaks from alkaline batteries, is often casually referred to as “battery acid,” it’s actually a base on the pH scale, which means it’s best neutralized with an acid, such as vinegar or lemon juice. Using a cotton swab, dab a little vinegar or lemon juice on the corroded area, wait a minute or two, and then wipe away the crystalline corrosion from the battery contacts and other places in the battery compartment where it may have spread. For stubborn spots, try scrubbing with a toothbrush. Scrape off any lingering residue with a toothpick. For especially heavy corrosion, try fine sandpaper, an emery board, or a small flathead screwdriver, but be gentle. Dip a fresh swab into some rubbing alcohol and clean off any residue on the contacts or in the battery compartment. A pencil eraser can be helpful for polishing up surfaces. Dry with a microfiber cloth and blow away any fibers. Use compressed gas for hard-to-dislodge debris. Let everything dry completely before installing fresh batteries and powering up. Photo: istockphoto.com If left in too long, a corroded battery may damage a device. While cleaning out the corrosion can usually get your electronics working again, sometimes it’s not enough. In these instances, check your device’s warranty. Although it’s unlikely, damage caused by a leaking battery may be covered. Another possibility: Duracell guarantees against defects in materials and workmanship, and Energizer offers no-leak guarantees for certain batteries. Making a claim can be time-consuming, but it could be worth the effort for a camera or another big-ticket item. Photo: istockphoto.com The best way to avoid having to clean battery corrosion out of your devices is to make sure your batteries don’t leak in the first place. There are a number of simple things you can do to prevent batteries from leaking: Don’t use expired batteries. Don’t mix old and new batteries or batteries of different brands, which Igbinijesu says can lead to performance problems or quicker decline. So, when replacing one battery in a compartment, go ahead and replace them all, using batteries of the same brand. Always store batteries at or below room temperature. Never store batteries in the refrigerator or freezer. Despite internet claims to the contrary, Igbinijesu notes, “Storing alkaline batteries in the freezer does not promote lifespan.” Don’t leave batteries loose in a purse, pocket, or desk drawer where the battery terminals could make contact with other metals. Don’t expose batteries to extreme temperatures or moisture. Always remove batteries from devices that you’re not planning on using for a while, such as air conditioning remotes. Always insert batteries in the correct direction. Don’t overcharge rechargeable batteries. When they’re fully charged, remove the batteries from the charger. Whether you’re selling or staying, everyone can get something out of a kitchen update. Learn why we consider this renovation the Most Valuable Project of 2025 and how to stay on budget. Download Article Get rid of chalky corrosion safely and quickly Download Article Whether you’re dealing with the battery in your car or an ordinary household battery, batteries can develop corrosion. Grime, damage, and old age can cause acid to leak from your battery, which creates that chalky material on the terminals. To help, we met with automotive repair specialist Duston Maynes to get expert guidance on how to get rid of this corrosion safely and efficiently. With a cold car, remove the battery terminals (do the negative terminal first). Mix warm water and baking soda together to make a thick paste. Apply the paste to your battery terminals. Scrub the terminals with an old toothbrush. Wipe the terminals dry before reattaching the battery. 1 Lift the hood of your car and assess the condition of the battery. You do not need to remove the battery from the vehicle to assess it or clean it. Pop the car hood open and locate the battery. It’s typically on the front of the engine block on the driver’s side. Visually inspect the general condition of your car battery. If the battery is not cracked or leaking battery acid, you can go ahead and start cleaning.[1] If your battery case has cracks, it’s swelling, or it’s actively leaking, replace the entire battery. 2 Remove the covers on top of the battery to access the terminals. With a totally cold car, use your fingers to pry up the red and black plastic covers that protect the terminals. Examine the battery cables and clamps for excess wear or corrosion. Corrosion appears as a white, ashy deposit around one or both battery posts. If the cables and clamps are slightly corroded or have just a little buildup, follow the instructions below on how to clean them.[2] If the damage is extensive (i.e. every inch of the terminal is covered in soot), you may want to completely replace the cables and clamps to avoid future problems. Advertisement 3 Disconnect the negative and positive clamps on your car battery. Before cleaning the battery, disconnect the battery. To do this, loosen the nuts on the clamps using a wrench. Once loose, remove the negative clamp (marked with a “-”) first. Only after the negative clamp is removed, remove the positive clamp (marked with a “+”).[3] The clamps may prove difficult to remove, especially if there is a lot of corrosion. You may need to use pliers to remove them. Don’t worry about damaging the clamps with a wrench. If you need to use so much force that the clamps end up damaged, you need to replace them anyway. If you do need to use pliers, be careful not to touch the tool to the car frame (or anything else metal) and the battery while working. This could potentially short out the battery. Use a memory saver device to save your settings. Most modern vehicles will automatically save your radio, seat, and car settings when you disconnect your battery, but some models won’t. If you want to 100% ensure you don’t lose anything, use a memory saver device. 4 Mix baking soda and water to make a thick paste. Maynes explains that baking soda and water are the ideal combo for cleaning battery corrosion. Combine 2–3 tablespoons (30–44 mL) of baking soda with 1 tablespoon (15 mL) of distilled water in a small bowl. Stir the ingredients together with a spoon to make a thick paste. Keep stirring until all of the bits of baking soda are fully dissolved in the water. If you prefer, you can also use a commercial battery cleaner instead of making your own with baking soda and water. Just follow the instructions on the label to apply it to the battery terminals. Put on safety glasses and rubber gloves. You’re extremely unlikely to get any battery acid on your skin, but it is a serious skin irritant, so take some precautions. Maynes says you’re best off wearing some protective eyewear and rubber gloves to protect yourself while you work. 5 Apply the baking soda paste to the battery connections. Maynes explains that you just have to dip an old toothbrush or a lightly damp rag into the baking soda paste. Rub the paste onto the corroded or dirty parts of your car’s battery. Once the baking soda is applied, you will see it bubble and foam as it reacts with the corrosion. Give the baking soda mix at least 5–10 minutes to soak in and loosen the corrosion. Be careful while you’re applying the paste. Although baking soda is generally safe, you should take care not to get it on other car components. Warning: Maynes says, “Don't pour water directly onto the battery.” If you do, you could risk shorting the battery. 6 Scrape off corrosion deposits with the toothbrush. Continue scrubbing the terminals with your baking soda paste and toothbrush. Add more paste whenever the old paste wears away and keep scrubbing until the corrosion is totally gone. There are special battery terminal brushes if you feel like you need something stronger and stiffer than a toothbrush. If the corrosion is that extensive though, you probably need to replace the battery. 7 Clean the baking soda off by wiping it away with a damp rag. Spritz a clean cloth with distilled water and wipe away the paste. Keep refreshing your rag with new water as you feel it drying out and continue wiping until almost all of the baking soda is gone. Be careful not to rinse the baking soda paste into the battery vents, as the baking soda can neutralize the battery’s acid and shorten the battery’s life. The vents are located on the sides of the battery and are connected to long vent tubes that direct harmful gases away from the vehicle’s cabin. 8 Wipe the terminals clean with a clean, dry rag. Maynes explains that it’s essential you dry the battery entirely before reconnecting it to your vehicle. Make sure that the terminals are completely dry by rubbing the dry rag over them 2-3 times. Be sure to use a rag that doesn’t have any grease or oil on it! Don’t use paper towels for this step. The paper will shred, leaving you with bits of paper towel stuck to your battery terminals. 9 Smear petroleum jelly onto the clean terminals to prevent corrosion. Dip 2 fingers into a jar of petroleum jelly and smear a thin layer across both the positive and negative terminals. Make sure your vinyl gloves are still on while you do this. Applying petroleum jelly to the now cleaned terminals will prevent corrosion from occurring again in the future.[4] 10 Reattach the 2 clamps back onto your battery. To complete the cleaning, you need to reattach the clamps that you removed earlier to secure the battery in place and restore the electrical connection. Reattach the positive clamp to the battery first by tightening it with a wrench. Once it’s firmly in place, then you can attach the negative clamp to the negative terminal on the battery. Use a wrench to tighten that clamp in place as well.[5] Once the clamps are on, replace the rubber or plastic shields covering the clamp/terminal junction. Advertisement 1 Examine the battery cradle’s terminals and the battery for corrosion. Open the device’s cover to access the battery cradle. Remove the battery cover to inspect the degree of corrosion. Assess these old batteries for cracks and leakage. Mild corrosion will appear as black spots, more severe corrosion appears as a white, ashy deposit around one or both battery posts or terminals.[6] If you find a battery that’s leaking acid (and not merely corroded), throw it away immediately. Any leakage is likely potassium hydroxide, a strong base. Be sure to wear skin and eye protection when cleaning out the battery cradle, as potassium hydroxide is caustic. If a device is powered by more than 1 battery, it’s possible for 1 battery to be corroded and another to be in fine shape. Pull out any non-corroded batteries and set them aside. You’ll reinsert them later once you’ve cleaned off corroded batteries and the cradle. The following baking soda cleaning method is just for any corrosion around the terminals, not for a leaking battery. 2 Mix baking soda and water to make a cleaning paste. Maynes says that baking soda and water is the ideal option for cleaning any kind of battery terminal. Make your cleaning agent by combining 2–3 tablespoons (30–44 mL) of baking soda with 1 tablespoon (15 mL) of water. Stir the components with a spoon to make a thick paste. Take care not to get baking soda on other electronic components—e.g., whatever electrical device the batteries that you are cleaning were housed in. 3 Rub any corrosion off the battery terminals with a cotton swab. Dip a cotton swab into the baking soda mixture. Smear the baking soda paste onto the battery connections and the 2 terminals at the end of each battery using the cotton swab. Once the baking soda is applied, you may see it bubble and foam, as it reacts with the corrosion. Let it soak in for about 5 minutes.[7] Warning: Wear vinyl dishwashing gloves while cleaning any battery corrosion. Take care not to touch with bare skin the white crusty buildup, as it is caustic and could burn your skin. Be careful not to get any water on your electronics when cleaning. 4 Wipe the battery and cradle off with distilled water and a cotton swab. When the foaming stops and there are no major deposits left to be scraped out, you’re ready to rinse off the inside of the cradle. Dip 1 clean cotton swab into a cup of distilled water. Then dab the cotton swab back and forth along the inside of the battery cradle. This will clear out any lingering baking soda and clean the connections so they’re ready to receive electrical current.[8] Be careful not to get any water on any electrical components, or you could damage the electrical equipment. Wait 15–20 minutes for the battery and cradle to dry out. 5 Install the cleaned batteries and close the cradle. Put the cleaned batteries into the now clean battery cradle. If you set aside un-corroded batteries earlier, fetch them and put them inside the battery cradle as well. Then, close up the case or put the cover back on. Put some pressure on the plastic cover to make sure that it’s firmly in place.[9] You’re now ready to resume using your electronics! If your battery develops corrosion again, replace it. Advertisement 1 Gas escape There are small vents on the side of every car battery that allow excess pressure buildup and gas fumes to escape. If a lot of those fumes end up escaping, the acid can cause corrosion on the terminals.[10] You shouldn’t normally have any natural gas escape. If this is happening frequently, it’s a sign that something is seriously wrong with your battery. 2 Overcharging If you have a rechargeable battery and you overdo it or you charged your battery recently after it died and let it charge for too long, overcharging can cause corrosion.[11] Charging a battery causes the acid inside the battery to activate, which can cause fumes to build up in the battery if you let it charge too long. 3 Damage Physical damage to a battery can cause corrosion. As the acid leaks out of the damaged battery case, it causes the chalky buildup you see.[12] Do not use a damaged battery. Car batteries can explode if they’re not stable, and a damaged battery is a serious risk—especially if the battery is beginning to swell. 4 Age Batteries naturally develop corrosion when they’re nearing the natural end of their life. Car batteries aren’t meant to last forever, so the corrosion could just be a sign that it’s time to get a new battery.[13] Replace your battery every 3-5 years. Even if there isn’t any evidence of a leak, it’s important to replace your battery before a problem develops. Advertisement 1 Inspect your battery regularly. Batteries will corrode over time as the gases they release interact with the surrounding environment. By checking your batteries periodically, you’ll spot corrosion before it really gets out of hand. Remember, even a little bit of corrosion is a sign you’re nearing the point where you need to replace the batteries, so the earlier you spot problems, the more time you’ll have to deal with the issue. 2 Keep your batteries safe and dry. Exposing your batteries to moisture, extreme temperatures, or physical damage may create a leak that produces corrosion. The safer you can keep your batteries when you’re not using them, the longer they’ll last and the less likely they’ll be to develop corrosion.[14] Always keep batteries indoors! Do not store batteries of any kind in an outdoor setting. 3 Avoid overcharging your battery. If you have a rechargeable battery, avoid leaving it on the charger unnecessarily for extended periods of time. Overcharging not only reduces the overall lifespan of the battery, but it increases the odds the fumes from the interior of the battery expand far enough to leak out of the battery, which will cause corrosion.[15] Advertisement Add New Question Question How do I check a battery for earthing? It's not really customary for a battery. But, I'd say if the battery is buried or is upside down and its posts are in the ground, either of these would be earthed and wasting their power. Question Can I get shocked if I touch a battery terminal? It's possible, but in most cases, touching the battery terminal won't shock you. Even if it does shock you, the battery won't seriously hurt you, since it only carries 12 volts. But, it's important to wear vinyl gloves so there's no chance of injury. And remove metal rings, watchbands, etc. Earthing while wearing a metal ring can burn through to the bone. Ask a Question Advertisement Thanks Thanks Advertisement Thanks Thanks Thanks Advertisement CP This article was co-authored by Charlie Payne and by wikiHow staff writer, Eric McClure. Charlie Payne is an Auto Repair Expert and the Owner & Operator of Perfect Reflections Auto Body based in Glasgow, KY. With over 21 years of experience, he specializes in auto restorations and collision repairs. Charlie is PPG and DuPont certified and earned a Bachelor's Degree from Liberty University. This article has been viewed 526,595 times. Co-authors: 11 Updated: June 19, 2025 Views: 526,595 Categories: Electrical Power Storage | Automotive Tools Print Send fan mail to authors Thanks to all authors for creating a page that has been read 526,595 times. "Worked great for me. There was mysterious blue stuff on the battery terminal, removed easily with baking soda mixture + wiping + rinsing. None of the metal parts appeared corroded at all. It would have been safer with goggles."..." more Share your story Step 1 Safety precautions Wear gloves to protect your hands from the corrosion—it's a skin irritant. If your device still works, power it down completely before starting. Step 3 Remove big chunks of corrosion Tool used on this step: Anti-Static Brush €2.95 Use a toothbrush or anti-static brush to gently remove any bigger chunks of corrosion from the battery terminals and battery recess. Use the point of a spudger to pick out any bits that are stuck. Pick around the batteries, and not at the batteries themselves. Flip your device over and gently shake out the loose corrosion and debris. Dispose of the corrosion and debris in the trash. Step 5 Clean the terminals Alkaline batteries contain a base, which is what corrosion is made of. An acid like white vinegar or lemon juice will neutralize this base. Lightly dip a cotton swab in white vinegar or lemon juice. Don't soak the cotton swab. Only use a small amount of liquid at a time. Gently rub the battery terminals with the cotton swab to dissolve and remove the corrosion. The corrosion may fizz and bubble. Don't worry, this is normal. Continue this process until there's no corrosion on the terminals. Tool used on this step: Microfiber Cleaning Cloths €4.95 Isopropyl alcohol will remove any residue left from the previous step. Lightly dip a cotton swab in highly-concentrated isopropyl alcohol (over 90%). Don't soak the cotton swab. Only use a small amount of liquid at a time. Gently rub the battery terminals with the cotton swap to remove any remaining residue from the previous step. Wipe the residue away with a microfiber or lint-free cloth. Repeat this process until the terminals are completely clean. Wait two minutes to allow any residual alcohol to evaporate. Choose a size and copy the code below to embed this guide as a small widget on your site / forum. Download Article Get rid of chalky corrosion safely and quickly Download Article Whether you’re dealing with the battery in your car or an ordinary household battery, batteries can develop corrosion. Grime, damage, and old age can cause acid to leak from your battery, which creates that chalky material on the terminals. To help, we met with automotive repair specialist Duston Maynes to get expert guidance on how to get rid of this corrosion safely and efficiently. With a cold car, remove the battery terminals (do the negative terminal first). Mix warm water and baking soda together to make a thick paste. Apply the paste to your battery terminals. Scrub the terminals with an old toothbrush. Wipe the terminals dry before reattaching the battery. 1 Lift the hood of your car and assess the condition of the battery. You do not need to remove the battery from the vehicle to assess it or clean it. Pop the car hood open and locate the battery. 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Exposing your batteries to moisture, extreme temperatures, or physical damage may create a leak that produces corrosion. The safer you can keep your batteries when you’re not using them, the longer they’ll last and the less likely they’ll be to develop corrosion.[14] Always keep batteries indoors! Do not store batteries of any kind in an outdoor setting. 3 Avoid overcharging your battery. If you have a rechargeable battery, avoid leaving it on the charger unnecessarily for extended periods of time. Overcharging not only reduces the overall lifespan of the battery, but it increases the odds the fumes from the interior of the battery expand far enough to leak out of the battery, which will cause corrosion.[15] Advertisement Add New Question Question How do I check a battery for earthing? It's not really customary for a battery. But, I'd say if the battery is buried or is upside down and its posts are in the ground, either of these would be earthed and wasting their power. Question Can I get shocked if I touch a battery terminal? It's possible, but in most cases, touching the battery terminal won't shock you. Even if it does shock you, the battery won't seriously hurt you, since it only carries 12 volts. But, it's important to wear vinyl gloves so there's no chance of injury. And remove metal rings, watchbands, etc. Earthing while wearing a metal ring can burn through to the bone. Ask a Question Advertisement Thanks Thanks Advertisement Thanks Thanks Thanks Advertisement CP This article was co-authored by Charlie Payne and by wikiHow staff writer, Eric McClure. Charlie Payne is an Auto Repair Expert and the Owner & Operator of Perfect Reflections Auto Body based in Glasgow, KY. With over 21 years of experience, he specializes in auto restorations and collision repairs. Charlie is PPG and DuPont certified and earned a Bachelor's Degree from Liberty University. This article has been viewed 526,595 times. Co-authors: 11 Updated: June 19, 2025 Views: 526,595 Categories: Electrical Power Storage | Automotive Tools Print Send fan mail to authors Thanks to all authors for creating a page that has been read 526,595 times. "Worked great for me. There was mysterious blue stuff on the battery terminal, removed easily with baking soda mixture + wiping + rinsing. None of the metal parts appeared corroded at all. It would have been safer with goggles."..." more Share your story Download Article Get rid of chalky corrosion safely and quickly Download Article Whether you’re dealing with the battery in your car or an ordinary household battery, batteries can develop corrosion. Grime, damage, and old age can cause acid to leak from your battery, which creates that chalky material on the terminals. To help, we met with automotive repair specialist Duston Maynes to get expert guidance on how to get rid of this corrosion safely and efficiently. With a cold car, remove the battery terminals (do the negative terminal first). Mix warm water and baking soda together to make a thick paste. Apply the paste to your battery terminals. Scrub the terminals with an old toothbrush. Wipe the terminals dry before reattaching the battery. 1 Lift the hood of your car and assess the condition of the battery. You do not need to remove the battery from the vehicle to assess it or clean it. Pop the car hood open and locate the battery. It’s typically on the front of the engine block on the driver’s side. Visually inspect the general condition of your car battery. If the battery is not cracked or leaking battery acid, you can go ahead and start cleaning.[1] If your battery case has cracks, it’s swelling, or it’s actively leaking, replace the entire battery. 2 Remove the covers on top of the battery to access the terminals. With a totally cold car, use your fingers to pry up the red and black plastic covers that protect the terminals. Examine the battery cables and clamps for excess wear or corrosion. Corrosion appears as a white, ashy deposit around one or both battery posts. If the cables and clamps are slightly corroded or have just a little buildup, follow the instructions below on how to clean them.[2] If the damage is extensive (i.e. every inch of the terminal is covered in soot), you may want to completely replace the cables and clamps to avoid future problems. Advertisement 3 Disconnect the negative and positive clamps on your car battery. Before cleaning the battery, disconnect the battery. To do this, loosen the nuts on the clamps using a wrench. Once loose, remove the negative clamp (marked with a “-”) first. Only after the negative clamp is removed, remove the positive clamp (marked with a “+”).[3] The clamps may prove difficult to remove, especially if there is a lot of corrosion. You may need to use pliers to remove them. Don’t worry about damaging the clamps with a wrench. If you need to use so much force that the clamps end up damaged, you need to replace them anyway. If you do need to use pliers, be careful not to touch the tool to the car frame (or anything else metal) and the battery while working. This could potentially short out the battery. Use a memory saver device to save your settings. Most modern vehicles will automatically save your radio, seat, and car settings when you disconnect your battery, but some models won’t. If you want to 100% ensure you don’t lose anything, use a memory saver device. 4 Mix baking soda and water to make a thick paste. Maynes explains that baking soda and water are the ideal combo for cleaning battery corrosion. Combine 2–3 tablespoons (30–44 mL) of baking soda with 1 tablespoon (15 mL) of distilled water in a small bowl. Stir the ingredients together with a spoon to make a thick paste. Keep stirring until all of the bits of baking soda are fully dissolved in the water. If you prefer, you can also use a commercial battery cleaner instead of making your own with baking soda and water. Just follow the instructions on the label to apply it to the battery terminals. Put on safety glasses and rubber gloves. You’re extremely unlikely to get any battery acid on your skin, but it is a serious skin irritant, so take some precautions. Maynes says you’re best off wearing some protective eyewear and rubber gloves to protect yourself while you work. 5 Apply the baking soda paste to the battery connections. Maynes explains that you just have to dip an old toothbrush or a lightly damp rag into the baking soda paste. Rub the paste onto the corroded or dirty parts of your car’s battery. Once the baking soda is applied, you will see it bubble and foam as it reacts with the corrosion. Give the baking soda mix at least 5–10 minutes to soak in and loosen the corrosion. Be careful while you’re applying the paste. Although baking soda is generally safe, you should take care not to get it on other car components. Warning: Maynes says, “Don't pour water directly onto the battery.” If you do, you could risk shorting the battery. 6 Scrape off corrosion deposits with the toothbrush. Continue scrubbing the terminals with your baking soda paste and toothbrush. Add

more paste whenever the old paste wears away and keep scrubbing until the corrosion is totally gone. There are special battery terminal brushes if you feel like you need something stronger and stiffer than a toothbrush. If the corrosion is that extensive though, you probably need to replace the battery. 7 Clean the baking soda off by wiping it away with a damp rag. Spritz a clean cloth with distilled water and wipe away the paste. Keep refreshing your rag with new water as you feel it drying out and continue wiping until almost all of the baking soda is gone. Be careful not to rinse the baking soda paste into the battery vents, as the baking soda can neutralize the battery's acid and shorten the battery's life. The vents are located on the sides of the battery and are connected to long vent tubes that direct harmful gases away from the vehicle's cabin. 8 Wipe the terminals clean with a clean, dry rag. Maynes explains that it's essential you dry the battery entirely before reconnecting it to your vehicle. Make sure that the terminals are completely dry by rubbing the dry rag over them 2-3 times. Be sure to use a rag that doesn't have any grease or oil on it! Don't use paper towels for this step. The paper will shred, leaving you with bits of paper towel stuck to your battery terminals. 9 Smear petroleum jelly onto the clean terminals to prevent corrosion. Dip 2 fingers into a jar of petroleum jelly and smear a thin layer across both the positive and negative terminals. Make sure your vinyl gloves are still on while you do this. Applying petroleum jelly to the now cleaned terminals will prevent corrosion from occurring again in the future.[4] 10 Reattach the 2 clamps back onto your battery. To complete the cleaning, you need to reattach the clamps that you removed earlier to secure the battery in place and restore the electrical connection. Reattach the positive clamp to the battery first by tightening it with a wrench. Once it's firmly in place, then you can attach the negative clamp to the negative terminal on the battery. Use a wrench to tighten that clamp in place as well.[5] Once the clamps are on, replace the rubber or plastic shields covering the clamp/terminal junction. Advertisement 1 Examine the battery cradle's terminals and the battery for corrosion. Open the device's cover to access the battery cradle. Remove the battery cover to inspect the degree of corrosion. Assess these old batteries for cracks and leakage. Mild corrosion will appear as black spots, more severe corrosion appears as a white, ashy deposit around one or both battery posts or terminals.[6] If you find a battery that's leaking acid (and not merely corroded), throw it away immediately. Any leakage is likely potassium hydroxide, a strong base. Be sure to wear skin and eye protection when cleaning out the battery cradle, as potassium hydroxide is caustic. If a device is powered by more than 1 battery, it's possible for 1 battery to be corroded and another to be in fine shape. Pull out any non-corroded batteries and set them aside. You'll reinsert them later once you've cleaned off corroded batteries and the cradle. The following baking soda cleaning method is just for any corrosion around the terminals, not for a leaking battery. 2 Mix baking soda and water to make a cleaning paste. Maynes says that baking soda and water is the ideal option for cleaning any kind of battery terminal. Make your cleaning agent by combining 2–3 tablespoons (30–44 mL) of baking soda with 1 tablespoon (15 mL) of water. Stir the components with a spoon to make a thick paste. Take care not to get baking soda on other electronic components—e.g., whatever electrical device the batteries that you are cleaning were housed in. 3 Rub any corrosion off the battery terminals with a cotton swab. Dip a cotton swab into the baking soda mixture. Smear the baking soda paste onto the battery connections and the 2 terminals at the end of each battery using the cotton swab. Once the baking soda is applied, you may see it bubble and foam, as it reacts with the corrosion. Let it soak in for about 5 minutes.[7] Warning: Wear vinyl dishwashing gloves while cleaning any battery corrosion. Take care not to touch with bare skin the white crusty buildup, as it is caustic and could burn your skin. Be careful not to get any water on your electronics when cleaning. 4 Wipe the battery and cradle off with distilled water and a cotton swab. When the foaming stops and there are no major deposits left to be scraped out, you're ready to rinse off the inside of the cradle. Dip 1 clean cotton swab into a cup of distilled water. Then dab the cotton swab back and forth along the inside of the battery cradle. This will clear out any lingering baking soda and clean the connections so they're ready to receive electrical current.[8] Be careful not to get any water on any electrical components, or you could damage the electrical equipment. Wait 15–20 minutes for the battery and cradle to dry out. 5 Install the cleaned batteries and close the cradle. Put the cleaned batteries into the now clean battery cradle. If you set aside un-corroded batteries earlier, fetch them and put them inside the battery cradle as well. Then, close up the case or put the cover back on. Put some pressure on the plastic cover to make sure that it's firmly in place.[9] You're now ready to resume using your electronics! If your battery develops corrosion again, replace it. Advertisement 1 Gas escape There are small vents on the side of every car battery that allow excess pressure buildup and gas fumes to escape. If a lot of those fumes end up escaping, the acid can cause corrosion on the terminals.[10] You shouldn't normally have any natural gas escape. If this is happening frequently, it's a sign that something is seriously wrong with your battery. 2 Overcharging If you have a rechargeable battery and you overdo it or you charged your battery recently after it died and let it charge for too long, overcharging can cause corrosion.[11] Charging a battery causes the acid inside the battery to activate, which can cause fumes to build up in the battery if you let it charge too long. 3 Damage Physical damage to a battery can cause corrosion. As the acid leaks out of the damaged battery case, it causes the chalky buildup you see.[12] Do not use a damaged battery. Car batteries can explode if they're not stable, and a damaged battery is a serious risk—especially if the battery is beginning to swell. 4 Age Batteries naturally develop corrosion when they're nearing the natural end of their life. Car batteries aren't meant to last forever, so the corrosion could just be a sign that it's time to get a new battery.[13] Replace your battery every 3-5 years. Even if there isn't any evidence of a leak, it's important to replace your battery before a problem develops. Advertisement 1 Inspect your battery regularly. Batteries will corrode over time as the gases they release interact with the surrounding environment. By checking your batteries periodically, you'll spot corrosion before it really gets out of hand. Remember, even a little bit of corrosion is a sign you're nearing the point where you need to replace the batteries, so the earlier you spot problems, the more time you'll have to deal with the issue. 2 Keep your batteries safe and dry. Exposing your batteries to moisture, extreme temperatures, or physical damage may create a leak that produces corrosion. The safer you can keep your batteries when you're not using them, the longer they'll last and the less likely they'll be to develop corrosion.[14] Always keep batteries indoors! Do not store batteries of any kind in an outdoor setting. 3 Avoid overcharging your battery. If you have a rechargeable battery, avoid leaving it on the charger unnecessarily for extended periods of time. Overcharging not only reduces the overall lifespan of the battery, but it increases the odds the fumes from the interior of the battery expand far enough to leak out of the battery, which will cause corrosion.[15] Advertisement Add New Question Question How do I check a battery for earthing? It's not really customary for a battery. But, I'd say if the battery is buried or is upside down and its posts are in the ground, either of these would be earthed and wasting their power. Question Can I get shocked if I touch a battery terminal? It's possible, but in most cases, touching the battery terminal won't shock you. Even if it does shock you, the battery won't seriously hurt you, since it only carries 12 volts. But, it's important to wear vinyl gloves so there's no chance of injury. And remove metal rings, watchbands, etc. Earthing while wearing a metal ring can burn through to the bone. Ask a Question Advertisement Thanks Thanks Advertisement Thanks Thanks Thanks Advertisement CP This article was co-authored by Charlie Payne and by wikiHow staff writer, Eric McClure. Charlie Payne is an Auto Repair Expert and the Owner & Operator of Perfect Reflections Auto Body based in Glasgow, KY. With over 21 years of experience, he specializes in auto restorations and collision repairs. Charlie is PPG and DuPont certified and earned a Bachelor's Degree from Liberty University. This article has been viewed 526,595 times. Co-authors: 11 Updated: June 19, 2025 Views: 526,595 Categories: Electrical Power Storage | Automotive Tools Print Send fan mail to authors Thanks to all authors for creating a page that has been read 526,595 times. "Worked great for me. There was mysterious blue stuff on the battery terminal, removed easily with baking soda mixture + wiping + rinsing. None of the metal parts appeared corroded at all. It would have been safer with goggles."..." more Share your story Battery corrosion is a common issue that can hinder the performance and lifespan of batteries. Still, you can ensure optimal battery health and functionality with the proper knowledge and preventive measures. Let's delve into the causes of battery corrosion, methods to clean corroded battery contacts, their effects, and essential tips to prevent it from occurring in the first place. Part 1. What causes battery corrosion? Battery corrosion occurs due to a chemical reaction between the battery's electrolyte and the metal components, primarily the terminals or contacts. The main culprits behind this corrosive process are: Acid Leakage: When a battery undergoes overcharging or experiences physical damage, its sulfuric acid can leak, leading to corrosion. External Factors: Exposure to moisture, high humidity, extreme temperatures, and environmental contaminants can accelerate the corrosion process. Impurities in the Battery: Manufacturing defects or impurities in the battery can trigger a chemical reaction, resulting in corrosion. Part 2. How to clean corroded battery terminals? 1. Precautions and Safety Measures When cleaning corroded battery contacts, it is essential to prioritize safety. Follow these precautions and safety measures before starting the cleaning process: Wear Protective Gear: Wear protective gloves and goggles to protect your hands and eyes from any contact with corrosive substances. This will prevent potential injuries and irritation. Work in a Well-Ventilated Area: Ensure you work in a well-ventilated space or near an open window. This will help dissipate any fumes released during the cleaning process. Disconnect the Battery: Before cleaning, it is crucial to disconnect the battery from any devices or power sources. This step minimizes the risk of electrical hazards, such as short circuits or shocks. 2. Cleaning Materials and Methods To effectively clean corroded battery contacts, you will need suitable cleaning materials and follow specific methods. Here's what you need to know: Choose the Right Cleaning Materials: Several options exist for cleaning battery corrosion. Baking soda mixed with water, vinegar, or commercial battery cleaners is commonly used. These substances help neutralize the acidic corrosion and facilitate the cleaning process. Prepare the Cleaning Solution: If baking soda is used, mix it with equal water to create a paste-like consistency. For vinegar or commercial battery cleaners, follow the instructions on the packaging. Apply the Cleaning Solution: Using a cotton swab or a clean cloth, apply the cleaning solution to the corroded battery contacts. Make sure to cover the affected areas thoroughly. Gently Scrub the Terminals: To remove the corrosion, gently scrub the battery terminals using a wire brush or a cotton swab soaked in the cleaning solution. Apply light pressure and scrub in circular motions to dislodge the corrosion without damaging the terminals. Repeat if Necessary: For severe corrosion, it may be necessary to repeat the cleaning process multiple times to achieve optimal results. Be patient and persistent in your efforts. 3. Rinse and Dry After cleaning the battery contacts, it is crucial to rinse and dry them properly. Follow these steps: Rinse with Clean Water: Rinse the battery terminals once the corrosion is removed. This will help wash away any residue from the cleaning solution and prevent it from causing further damage. Thoroughly Dry the Terminals: After rinsing, ensure that the battery terminals are completely dry before reconnecting them. Use a clean, dry cloth or allow them to air dry naturally. Moisture can contribute to future corrosion, so this step is vital in preventing its recurrence. Following these cleaning methods and taking necessary precautions, you can effectively remove corrosion from battery contacts and restore their functionality. Remember to prioritize safety, choose suitable cleaning materials, and ensure thorough rinsing and drying before reconnecting the battery. Part 3. What are the effects of battery corrosion? Detrimental Effects on Battery Performance: Reduced Conductivity: Battery corrosion creates a barrier that hinders the flow of electricity, leading to decreased conductivity and compromised power delivery. Voltage Drop: Corrosion on battery contacts causes a decrease in voltage when connected to devices, potentially resulting in decreased performance or device malfunction. Potential Damage to Electronic Devices: Corrosion can spread to electrical connections within devices, interfering with their proper functioning and causing malfunctions or complete failure. Examples of Battery Corrosion Situations: Automotive Batteries: Corrosion commonly occurs in car batteries due to exposure to moisture, temperature fluctuations, and chemical reactions during charging and discharging processes. Household Electronics: Battery corrosion can affect devices such as remote controls, toys, and portable electronics. Humid environments, frequent battery changes, and prolonged inactivity can contribute to corrosion. Portable Devices: Battery-powered devices like smartphones, tablets, and laptops are prone to battery corrosion if adequately protected and maintained. Corrosion on battery contacts can hinder functionality and reduce battery life. Part 4. How to prevent battery corrosion? Keep Batteries Dry Moisture is a common cause of battery corrosion. Ensure that batteries and their compartments remain dry. Avoid exposing batteries to water or excessive humidity. Store Batteries Properly Store batteries in a cool, dry place when not in use. Avoid storing them in areas with high humidity or extreme temperatures, such as near heating vents or in direct sunlight. Remove Batteries When Not in Use If you're not planning to use a device for an extended period, remove the batteries. This helps prevent continuous exposure to potential moisture or chemical reactions that can lead to corrosion. Inspect Batteries Regularly Routinely check your batteries for signs of corrosion. Look for any buildup or discoloration on the battery terminals or contacts. Early detection allows for timely cleaning and prevents corrosion from spreading. Clean Battery Contacts Regularly clean battery contacts to remove any existing corrosion or buildup. Use a soft cloth or an eraser to wipe the terminals gently. Ensure the contacts are dry before reinserting the batteries. Use Quality Batteries Opt for reputable brands and high-quality batteries. Inferior or expired batteries are more prone to leakage and corrosion. Invest in reliable batteries that have a good reputation for performance and durability. Install Batteries Correctly When inserting batteries, ensure they are placed in the device with the correct polarity (+/-) as indicated. A proper installation can lead to battery leakage and corrosion. Avoid Mixing Different Battery Types Mixing different types of batteries (e.g., alkaline, lithium, rechargeable) can cause chemical reactions and increase the risk of corrosion. Stick to using a battery in a device. Replace Damaged Batteries Promptly If you notice signs of leakage or damage to a battery, replace it immediately. Damaged batteries are more likely to leak and cause corrosion. Part 5. Conclusion Battery corrosion is a common problem that can significantly impact the performance and lifespan of batteries. You can effectively clean and prevent battery corrosion by understanding the causes, implementing proper cleaning techniques, and adopting preventive measures. Regular maintenance, adequate storage, and proactive care will go a long way in ensuring optimal battery health and maximizing their longevity. A disk battery is a small, round cell used in watches, remotes, and other electronic devices. It delivers steady power for compact, low-drain devices. Discover the type of battery that powers space heaters and learn how to choose the right one for efficient heating in your home or office. The LR14 battery, also known as a C battery, delivers steady power. Learn its specs, uses, lifespan, and how it compares to other battery types. Understanding watch battery dimensions helps you choose the right size, voltage, and equivalent model to keep your watch running safely and smoothly. Discover battery generator runtime & lifespan factors. Learn how to maximize performance and choose the right power solution. Credit: Javier Zayas/Getty Images Electronic toys, tools, remotes, and flashlights are great... until they stop working. This usually means it's time for fresh batteries! But when you open the battery case you find the old ones have corroded. Most of the time, the item won't work again until you clean the leak from the contact points. Fortunately, you can use products you probably have on hand to clean battery corrosion and save the day. Safety is always the most important consideration when removing battery corrosion. Use eyewear protection and gloves to protect yourself from the corrosive materials. Battery leakage can contain caustic chemicals such as sulfuric acid that can damage your eyes and burn your skin. Corroded and leaking batteries should be removed from the item, placed in a plastic bag, and disposed of following waste guidelines in your area. Do not attempt to clean the batteries or reuse them. Protect your work surface with disposable materials like newspaper or paper towels before cleaning the battery case of the item. Work in a well-ventilated space. Wear gloves and remove the batteries from the device. Properly dispose of all of the batteries, even those that don't look corroded. Add a small amount (about a tablespoon) of distilled white vinegar or fresh lemon juice to a small bowl. Dip an old toothbrush, small bottle brush, or cotton swab into the vinegar and thoroughly wet the corroded areas in the battery case. Allow the solution to work for about 60 seconds and then use the brush or swab brush to scrub away corrosion residue from the contact points and other areas of the battery compartment. Carefully inspect the battery contact points in the compartment for any remaining corrosion. If they don't look completely clean, mix a tablespoon of baking soda with a few drops of water, lemon juice, or vinegar in a small bowl.Dip a cotton swab in the mixture and gently scrub the contact points. Move to a new cotton tip as any rusty residue is transferred.When all of the residue is removed, carefully wipe the contact points with a paper towel to remove any traces of the baking soda. Device still not working? Try rubbing a pencil eraser over the battery contact points to remove any remaining traces of cleaning products and corrosion. Be sure the battery compartment is completely dry in every nook and cranny.Insert fresh batteries—no mixing old and new! Most rechargeable batteries (Nickel Cadmium, NiCad, or Ni-Cd) are less prone to leakage than alkaline batteries. However, if they leak, they are more corrosive and require different steps for cleaning up the residue. You should never attempt to recharge leaking rechargeable nickel-cadmium batteries. To clean away corrosion: Wearing gloves and eye protection, remove and dispose of the batteries properly.Sprinkle dry baking soda in the battery compartment. Leave for at least 60 seconds and then empty the baking soda into a trash can.To remove any remaining corrosion, mix a few drops of water, vinegar, or lemon juice with fresh baking soda.Dip a cotton swab in the paste and rub the contact points. Wipe clean with a paper towel before inserting new batteries.When no more residue is transferred, carefully dry the contact points with a paper towel. Lithium batteries are used in laptops, cell phones, and vape pens. While it is unusual for them to leak and cause corrosion, if it happens it is quite dangerous and highly combustible. Do not attempt to clean the device yourself. Contact your local hazardous waste professionals for the proper disposal instructions. Check the battery case of an item often to check for leakage or corrosion. Remove and dispose of batteries and clean away corrosion as soon as you notice any residue in the battery case.Always store batteries in a cool, dry place.Dispose of expired batteries properly.Do not mix old and new batteries in the same device.If you don't plan to use a battery-powered item regularly, remove the batteries from the device and store them separately.To keep batteries handy, use painter's tape to secure the batteries to the outside of the item. Tips, tricks & ideas for a better home and yard, delivered to your inbox daily. Batteries—particularly the alkaline kind—can leak over time, and when they leak inside an electronic device, they can damage the battery contacts and circuitry. The good news is that most batteries that are packaged, stored, and used properly don't leak. According to Osarumen Igbinijesu, senior quality assurance engineer at national retailer Batteries Plus, "For leakage to occur, it is typically the result of either damage or defect." And when a battery does leak, you can usually clean battery corrosion yourself and get your device working again. When your remote or a flashlight suddenly stops working and you open it up to see what's wrong, you may notice a flaky, white substance encrusting the battery terminals and the contacts in the battery compartment. This corrosion is caused by a leaky battery. Through damage to the battery, manufacturing defects, or excessive heat, or even when a battery sits unused for long periods of time, pressure from gas produced inside the battery can build up and break through insulating seals. This allows the battery's electrolyte, an aqueous solution of potassium hydroxide, to seep through the seals. When potassium hydroxide reacts with the carbon dioxide in the air, it forms potassium carbonate, which is that familiar white crystalline substance. Potassium hydroxide is a caustic chemical that can irritate eyes and skin, so when you're cleaning up battery corrosion, protect work surfaces and wear gloves. Glasses are a good idea, too, just in case you accidentally flick anything toward your eyes. There's no need to go crazy: Basic precautions are sufficient. That said, avoid ingesting any of the leaked chemicals, and remember that a swallowed battery of any type always requires an immediate trip to the ER. Household batteries fall into two categories: primary (or single-use) batteries and rechargeable batteries. There are several types of batteries within each category. Of the many kinds of batteries, alkaline are the most likely to corrode. Alkaline: One of the most common and widely available household batteries; moderately priced; prone to leaking. Lithium: Long life and long shelf life; more expensive than alkaline; not prone to leaking. Zinc carbon: Inexpensive; generally used for low-power devices like clocks and remotes; tend to leak. Silver oxide: Expensive; button cell; used for watches, calculators, hearing aids, and other small devices; not prone to leaking. Zinc air: Button cell; primarily used in hearing aids; can leak if exposed to high temperatures or humidity. Lithium ion: Popular; used in laptops, smartphones, tablets, and other devices; not prone to leaking. Nickel cadmium (NiCd): Used in toys, digital cameras, and flashlights; may leak if overheated, overcharged, or damaged. Nickel metal hydride (NiMH): Wide application, including cellphones and laptops; long lived; not prone to leakage unless overcharged or damaged. Photo: istockphoto.com Bobvila.com may earn a commission from purchases made through these links. Working Time: 15 minutes Total Time: 45 minutes, including drying time Skill Level: Beginner Estimated Cost: $5, depending on supplies on hand Spread newspaper over your work surface, and put on protective gear: specifically, gloves and safety glasses. Carefully take the corroded batteries out of the battery compartment and dispose of them. Rough guidelines for disposal follow, but regulations vary by municipality, so check with your local sanitation department to find out how to dispose of batteries properly. The EPA also provides information about safe battery disposal, and check out Call2Recycle and Earth911 for drop-off sites and shipping options around the country. Alkaline and zinc-carbon batteries can usually be thrown in the regular trash, but check with your local sanitation department to see if recycling programs are available. Note that in California, all batteries are considered hazardous waste and must be taken to a hazardous waste collection event or a permanent collection center. Button cell and lithium single-use batteries typically cannot be put in the trash. Check for local recycling options. Rechargeable batteries of all types, including lithium ion, nickel cadmium, and nickel metal hydride, must be taken to a recycling center or hazardous waste collection site. Check with your local waste management provider. If storing spent or corroded batteries in between trips to the local hazardous waste collection center, Igbinijesu recommends taping battery terminals or putting each battery in an individual plastic bag to avoid the risk of sparks. Although potassium hydroxide, the substance that leaks from alkaline batteries, is often casually referred to as "battery acid," it's actually a base on the pH scale, which means it's best neutralized with an acid, such as vinegar or lemon juice. Using a cotton swab, dab a little vinegar or lemon juice on the corroded area, wait a minute or two, and then wipe away the crystalline corrosion from the battery contacts and other places in the battery compartment where it may have spread. For stubborn spots, try scrubbing with a toothbrush. Scrape off any lingering residue with a toothpick. For especially heavy corrosion, try fine sandpaper, an emery board, or a small flathead screwdriver, but be gentle. Dip a fresh swab into some rubbing alcohol and clean off any residue on the contacts or in the battery compartment. A pencil eraser can be helpful for polishing up surfaces. Dry with a microfiber cloth and blow away any fibers. Use compressed gas for hard-to-dislodge debris. Let everything dry completely before installing fresh batteries and powering up. Photo: istockphoto.com If left in too long, a corroded battery may damage a device. While cleaning out the corrosion can usually get your electronics working again, sometimes it's not enough. In these instances, check your device's warranty. Although it's unlikely, damage caused by a leaking battery may be covered. Another possibility: Duracell guarantees against defects in materials and workmanship, and Energizer offers no-leak guarantees for certain batteries. Making a claim can be time-consuming, but it could be worth the effort for a camera or another big-ticket item. Photo: istockphoto.com The best way to avoid having to clean battery corrosion out of your devices is to make sure your batteries don't leak in the first place. There are a number of simple things you can do to prevent batteries from leaking: Don't use expired batteries. Don't mix old and new batteries or batteries of different brands, which Igbinijesu says can lead to performance problems or quicker decline. So, when replacing one battery in a compartment, go ahead and replace them all, using batteries of the same brand. Always store batteries at or below room temperature. Never store batteries in the refrigerator or freezer. Despite internet claims to the contrary, Igbinijesu notes, "Storing alkaline batteries in the freezer does not promote lifespan." Don't leave batteries loose in a purse, pocket, or desk drawer where the battery terminals could make contact with other metals. Don't expose batteries to extreme temperatures or moisture. Always remove batteries from devices that you're not planning on using for a while, such as air conditioning remotes. Always insert batteries in the correct direction. Don't overcharge rechargeable batteries. When they're fully charged, remove the batteries from the charger. Whether you're selling or staying, everyone can get something out of a kitchen update. Learn why we consider this renovation the Most Valuable Project of 2025 and how to stay on budget

securely held in place to keep it from bouncing around and shorting against grounded car parts. Use a battery trickle charger or maintainer to help your battery stay fully charged. Ahead, you'll find advice from experienced Automotive Service Excellence (ASE) and manufacturer-certified technicians who will guide you through the steps to clean battery corrosion and help extend the life of your battery. Baking soda or spray battery cleanerBattery terminal anti-corrosion washersBattery terminal covers (if missing)Battery terminal protective spray or greaseBucket of clean water or garden hoseDielectric grease or VaselineDisposable containerDisposal shop or paper towelsDistiller water (optional) A battery contains sulfuric acid that can cause serious burns. Always wear gloves and eye protection when working around a battery. Smoking, flames, sparks, or other ignition sources can cause a battery to catch fire or explode. Exercise caution when jump-starting or working near a battery with metal tools to prevent short circuits and sparks. If you come into direct contact with battery acid, flush with plenty of water and seek medical attention immediately. VIA MERCHANT Don't skip this step. A battery memory saver supplies current to different computers to avoid deleting, radio, keyless entry and clock memory settings. It will also save other critical data, including engine monitor status, that if not preserved, will turn on the check engine light and cause drivability issues. Here's how to do it: Family Handyman Complete DIY projects like a pro! Sign up for our newsletter! Do It Right, Do It Yourself! Mix one tablespoon of baking soda with two cups of hot water in an old, clean plastic cup. Remove heavy corrosion from the outside of the terminals with the plastic parts cleaning brush. Clean the battery case with an old toothbrush or parts brush and baking soda solution or spray battery cleaner. Flush the battery with clean water and wipe dry. Be careful — do not splash the water or cleaning solution on you or other parts of your car. Dry the battery with clean, disposable shop rags. Family Handyman According to ASE master technician Jon Stull, look for the positive (+) and negative (-) markings on the battery itself. The positive cable should be red or have a red cover. The negative cable should be black or have a black cover. First, determine the positive and negative terminals. Always disconnect the negative (-) black battery terminal first. Always reconnect the negative (-) black cable last. Remove battery terminal protective covers. Loosen the negative (-) terminal clamping bolts with a wrench or socket. Disconnect the terminal clamp from the negative (-) battery post. Do not twist the terminal clamp if it's stuck or "frozen" to the battery post. Use a battery terminal puller to carefully remove the terminal. Repeat for the positive (+) post. Even after a lifetime in the automotive repair industry, sometimes I find identifying dirty or corroded battery cables confusing. Cleaning the battery should expose the (+) and (-) markings. If you're still unsure, use an inexpensive digital volt ohm meter (DVOM) to determine which is which. If you connect the positive lead of the DVOM to the positive battery terminal, and the negative lead to the negative battery terminal, the DVOM should display the battery voltage, around 12.6V. If the DVOM displays a negative (-) symbol in front of the battery voltage reading, you've connected it backward. Either way, now know how to proceed! Deep clean the battery posts and terminals with a battery terminal cleaning tool (recommended) or, in a pinch, 120-grit sandpaper. Use caution and remove only enough material to fully clean battery corrosion from the posts and terminals. Removing too much material from the posts or terminals will cause poor connections and additional repairs. Clean any dirt from the posts with a damp paper towel. Dry the posts with clean, disposable shop rags. FAMILY HANDYMAN Family Handyman Always connect the positive/red terminal first. Push down the terminal clamps onto the post until they touch the anti-corrosion washers or top of the battery. In most applications, the top of the post will stick up slightly past the top of the terminal end. Securely fasten terminal clamp nuts with a wrench or socket. VIA MERCHANT Before sliding the battery terminal covers back onto the terminal clamps, coat both terminals with battery terminal protection grease (preferred) or Vaseline to prevent corrosion. Using protection grease or Vaseline gives you more peace of mind and double the protection. Fortunately, now that you know how to clean corroded battery terminals, you can do this repair without too much trouble. Plus, extra protection is never a bad thing. VIA MERCHANT ASE master technician John Alcaro advises checking the battery fluid level if your car has a non-maintenance-free battery. "Top [the battery] off with distilled water if the [fluid] level is low," says Alcaro. FAMILY HANDYMAN Unfortunately, over my career, I have seen the damage caused by not cleaning corroded battery terminals —and it's more serious and costly than just difficulty starting. Extreme voltage, and amperage surges from potential arcing between a corroded terminal clamp and battery post can quickly cause an engine control module (ECM), the electronic air conditioner display/control panel or any of the other sensitive, and expensive electronics in our cars and trucks to fail. About The Experts Jon Stull is an ASE and Ford certified master technician, PennDoT certified emissions and safety inspection instructor and inspector and a Pennsylvania Department of Education (PDE) certified Career and Technical Education automotive technology instructor at North Montco Technical Career Center in Lansdale PA. John Alcaro is a former repair automotive shop owner and has been an ASE master technician for over 35 years. He is a PennDoT certified emissions and safety inspection instructor and inspector, and PDE certified automotive technology instructor at North Montco Technical Career Center. Sources Duffy, J. (2022). Modern Automotive Technology (10th ed., pp. 359, 368-37). The Goodheart-Willcox Company, Inc., Tinley Park, IL. John Stella, ASE technician, Faulkner Collision (Interview, Jan 15, 2025) You wash, wax, and vacuum your car to keep it looking sharp. But have you ever considered cleaning things under the hood? By cleaning your battery terminals, you can actually help the car battery perform stronger, longer! We'll show you how to clean the terminals and help prevent car battery corrosion in only FIVE steps – with materials you probably already have at home! Materials Protective gloves, like dish gloves Baking soda Water Old toothbrush Rag Petroleum jelly Step 1: Mix up your homemade battery cleaner. The recipe is simple. Mix one tablespoon of baking soda into one cup of water, and stir it together until it's thoroughly mixed. Step 2: Undo the cables from the battery and inspect it. Make sure your engine is off. Pop open your hood and remove the negative battery cable first. Then the positive cable attached to your battery. Some batteries may be in the trunk or under a seat. (Turn to your owner's manual for more information.) Then, assess your battery. Buildup, battery corrosion, and grime on the terminals can greatly impact your engine and battery performance. If you notice that the battery case is leaking, swollen, or bloated, skip the cleaning and head straight to your nearest Firestone Complete Auto Care for a new battery. Yours is on its way out! Step 3: Dip a toothbrush in your cleaner and start scrubbing! Grab an old toothbrush, dip it in your baking soda cleaner, and start scrubbing the terminals. This will take a little bit of elbow grease and you'll need to continuously clean off the toothbrush as you work. Clean the terminals thoroughly, until all of the buildup has been removed. Do not put the toothbrush back in the bathroom! Step 4: Rinse off the residue with water and dry. After you've removed all of the corrosion and dirt from the terminals, give the battery a quick rinse. Fill up a spray bottle with a bit of water and spray down the terminals. If you don't have a spray bottle, you can also wipe everything down with a damp rag. Then, use another rag to dry the terminals completely. Step 5: Rub petroleum jelly onto the terminals and reattach the cables. Once the terminals are dry, dab a bit of petroleum jelly onto them. This will lubricate them, help prevent further corrosion, and help strengthen the connection. Reattach the positive and negative cables, and you're all set! Be careful, too much petroleum jelly can cause a poor connection. Keeping your car battery clean can help get things moving when your car won't start and battery flow is weak. Staying on top of your battery's charge is crucial to avoid getting stranded. Stop by your nearest Firestone Complete Auto Care for a battery test at your convenience! Our technicians will let you know just how much "life" is left in your battery, so you can hit the road with peace of mind – and a new battery, if necessary! Up Next We've all experienced a car that won't start. Read on to find out what the issue might be and if it may be time to get your car battery replaced. Read More Get help choosing the right battery for your car with this handy guide, from your friends at Firestone Complete Auto Care. Stop by for a battery test today! Read More Learn more about the top 5 reasons your car won't start and what you may be able to do to bring it back to life ASAP, from Firestone Complete Auto Care. Read More