



RUST REMOVAL USING ELECTROLYSIS METHOD

Submerge the item in a solution of baking soda and water. Connect a battery charger, and let it sit overnight and by the next day the rust will have come off. Using electrolysis method will not damage precious item unlike old method such as using abrasive to remove rust etc.

1. A plastic bucket
 2. An anode
 3. Auto battery charger
 4. Baking soda or washing powder
 5. Measuring spoon
 6. Scotch Brite pad and soft bristle brush
 7. Wire leads
- Wash the item and ensure it is clean from oil, dirt etc. Do give it a good bath with soap and water.
 - Make an anode. You need some kind of sacrificial steel. It's best if the anode surrounds the tool so the electrolysis can happen from all sides. The anode will get eaten up by the electrolysis process, and will need to be replaced after being used a few times. Connect one of the wire leads to the anode. Make sure you have a good, solid connection and that the lead is long enough to connect to the battery charger outside of the bucket.
 - Connect a lead to the tool. You've got to have a good connection or the process won't work well. This can be challenging with a rusty tool. You may have to clean a small section of the tool with sandpaper to make certain you have contact.
 - Make up the electrolyte solution. You need enough water to completely submerge the tool. Add one tablespoon of baking soda or washing powder (either one will work) per gallon of water. Mix the solution to dissolve the powder.
 - Suspend the tool in the vat and check the set up. Try to arrange the anode so it surrounds the tool, but don't let the tool and anode touch each other.
 - Connect the clips from the battery charger to the leads on the tool and anode. Make sure you get this right. With the charger unplugged connect the positive to the anode and the negative to the tool. If you do this backwards your tool will become the



sacrificial anode. Set the charger on a 2-amp charge and plug it in. Don't let the connections from the charger touch the electrolyte solution.

- Within minutes of plugging in the charger you should see bubbles rising from the tool. Allow the tool to “cook” for 15-20 hours. After some time the top of the vat will be covered with sludge. This is a good thing. The sludge is the rust coming off the tool.
- Unplug and disconnect the charger and remove the tool from the solution. It won't look like much now. It'll need some cleaning. Wearing rubber gloves, use a fine Scotch Brite pad to remove the sludge from the tool. It doesn't take much elbow grease, just some wiping.
- Use a soft bristle brush to get into the spots you can't reach with the pad. Wipe the tool clean using a paper towel. After the tool is clean and dry, coat it with wax so it doesn't start to rust again.