

## Technical Tip – Derusting Parts by Chris Johns

Those of you who read Practical Classics may have seen this in a recent issue, but if, like me, you treat these wonder cures with some scepticism, this one really does do what is claimed and unlike just about any other thing to do with restoring old cars it is very cheap and involves virtually no physical effort. It works on the principal that rust occurs through electrolytic action – as I am sure you will remember from your chemistry lessons at school and you just reverse that process

**Requirements:** - Large plastic container, water, washing soda, old pieces of steel plate, 3 or 4 crocodile clips. Some wire, a battery charger, goggles and rubber gloves (available from any good kitchen). Remember wear the rubber gloves ( but you had better tell her what you have used them for) and a good pair of goggles – the process uses washing soda and it is not good to get it in your eyes and on your skin.

**The Process:** Take a large plastic container – a garden waste bin obtainable from a garden centre (or as in my case pinched from my wife) is ideal. Fill it nearly full of water – they take about 25 litres. Add some washing soda – now this is the hard bit because it involves going into a supermarket to get it – but believe me it is possible – once you have summoned up the courage to go through those doors it really isn't too hard – alternatively you can persuade someone else to get it (like I did). You need to add about 10g for every litre and give it a good stir. Take your crocodile clips and join them together with wire sufficiently long so that you can daisy chain them around the edge of the bin. Now take a few steel plates – doesn't mater if they are rusty but if they are, clean off a contact point and clip them around the side of the container with the crocodile clips and cleaned off bit above the water level so they are all connected together. Now take your part to derust and suspend it in the electrolyte. Make sure that it is not touching the metal plates. It is best to do this with a piece of wire and a steel rod – that way you can connect the power supply via the battery charger clip and hang your bits of the rod with wire loops to make the connection but make sure that you have a good connection by filing a contact area on your bit being rescued.

Now comes the fun bit. Take an ordinary battery charger connect the red (positive ) to the plates and the black (negative) to the rod with your bits on it. Keep the battery charger well away from the bin – it doesn't do the battery charger or you much good if it falls in. Switch on the battery charger. You will almost immediately see little bubbles in the electrolyte near the component and the plates – it's working. Now go off and have cup of tea. Be patient it can take several days to clean a badly rusted part. If it is badly scaled, after a couple of hours take it out and rinse it in water and knock off the scaly surface rust which by this time should be quite loose, and put in back in the bath. When it is finished (don't worry it won't do any harm to leave it in too long), take it out and wash it off and with a scouring pad ( be careful that you are not caught pinching this out of the kitchen) clean off the black surface deposit and hey presto it should be bright and shiny underneath.

Note – for those who have difficulty in telling the black from red wire on the battery charger – if you get them the wrong way round and leave your component in the bath ' derusting' for several days – it will be gone when you get back because you will have made a rusting machine instead of a derusting machine!

A few tips:

Do it in a well ventilated area the bubbles given off are hydrogen which is highly inflammable (*mixed with air it could literally blow the building up. Ed.*). Make the anode plates as big a surface area as possible. Make sure that your component faces an anode – it will only derust surfaces that can 'see' the anode. It will not derust hollow sections but if you put an anode inside wrapped in porous foam so that it doesn't touch the surface of the component it will derust the inside. If it touches the component you will knacker your battery charger. Keep the current as low as possible. You can make the process more effective if you can make a low voltage source giving about 0.5 amps. But don't worry a battery charger is quite effective. It will also remove paint – very slowly. Make sure the anodes are only mild steel – some metals like chromium can create nasty substances in these conditions. Don't try it on non steel components. Do all this whilst the wife is out if you know what is good for you.

Photo below: This is a Buckler component - a rear spring shackle showing one which has had the treatment and one which has not.

