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# TECH CORNER

## Acid Flux Clean-Up and Chassis Building

Cleaning your chassis during and after the build is as important as making sure the chassis is square and your solder joints are neat and strong.

Liquid acid flux is typically a solution of hydrochloric acid (HCL). Hydrochloric acid contains chloride ions that readily promote rusting of metals. When building your slot car chassis to ensure you have removed all the acid it will require post treatment processing. Make sure you clean the entire chassis not just the area where the flux was applied as the acid fumes will cause rust on any steel part left in the chassis when soldering. I use a 'build' axle for construction and install a new or 'race' axle for competition. You would be surprised how fast 304 stainless rusts, yes rusts when acid flux fumes are present.

Below are several methods I have collected from the Interweb by various builders on how they approach the acid flux cleaning process. They are all excellent solutions and any one of them will complete the task.

- Soldering heat should neutralize most of the flux. An alkali (base) will neutralize any remaining. The abrasive cleanser (Ajax) is alkali, so it both neutralizes acid and polishes away any other contamination or discoloring, and with the detergent, washes the parts clean. Paste fluxes have the acid mixed in some sort of paste base which must be cleaned off with a solvent or detergent. Note: Ajax and Comet can dull the solder.
- Bring the chassis parts to your sink and scrub with an SOS steel wool pad. This gets rid of any residue and polishes the metal for a finished look or to get it ready for the next soldering part of the chassis build. Do not use Brillo! If you try the SOS pad and water in the sink method, you will see just how well it works to remove any residue and polish the metal without scratching it. Of course, dry it well with paper towels. Follow up with a fine metal polish between steps and when the chassis is all finished. This keeps the rust away.
- Using 99% isopropyl alcohol (available at Ace Hardware) for clean-up of acid flux. Followed by polishing with abrasive cleaner like Ajax or toothpaste. If you don't want to get the whole part wet, a paste of Arm and Hammer baking soda and water can be used to neutralize the acid. Apply with a small brush, then rinse off with that brush dipped in plain water.
- Acetone & a Q-Tip to get off stubborn stains.
- Someone suggested cleaning chassis with orange hand cleaner.
- A spray bottle filled with a Baking Soda and Water solution. Baking soda neutralizes the acid. Spray the chassis and jig numerous times throughout the building process. Nothing locks up a hinge quicker than acid. A few tablespoons per quart does the trick. Once the foaming stops, give everything a quick rinse under water.

Note on the last bullet item – CLEAN YOUR JIGS AND FIXTURES!

After cleaning, I use a premium liquid wax like Meguiar's on the completed chassis to add protection and keep it shiny.

*Now Get out... Go racing... and most of all enjoy!*