

Courtesy of www.fboerger.com.

How I clean a fuel tank.....

I generally use a three pronged attack in my war against tank crud, starting with cheap chemicals and working my way up in cost and time until the job is done to suit me.

First you need to determine if it's just varnish and decomposed gasoline, and not varnish plus gravel, dirt, bird feathers, straw, dead mice, nests, red rust, etc, like one finds in a tank on a tractor that was left sitting in the fencerow with no cap.

To dissolve varnish, my favorite solvent is Methyl Ethyl Ketone, or MEK. You can find this in the paint/thinners section of most Lowe's/Home Depot/Ace Hardware stores. You may need several quarts depending on the size of the tank and the amount of varnish in there. Fill the tank part way, swish it around, and then let it capped for a while so it can work. Now you swish, drain, repeat, and maybe use a few nuts or small bolts in there to cause aggressive agitation, but steel ones that can be retrieved easily using a magnet.

If you have non-petroleum contaminants in there, hot lye water will really do the job to emulsify that stuff into a water-soluble paste that can probably be removed with a good hot water rinsing. Using a power washer will also help speed the job. You can also repeat this process of hot lye rinsing, but be careful that you don't harm the paint on the outside of the tank if that matters. If it does not, fill it with a cork in the bung, and cap it and let it sit overnight. Any petroleum will turn to a type of primitive soap, and the dirt will deteriorate into simpler sediment, both of which can be rinsed out. Again try the nuts and bolts method during agitation.

The last chemical I use is Phosphoric Acid. This will convert any red rust into an inert form of black oxide that will be harmless if left in the tank. Now, rinse, slosh, and repeat, until you can no longer see any rust. You'll want to rinse with plenty of water to get the foamy, soapy residue of the acid out, but don't worry about the discoloration left behind. That is a phosphate coating that will help inhibit rust in the future.

Now this tank is pretty much chemically devoid of any vestiges of flammable hydrocarbons, so now is the best time to solder any pin holes or place any repair patches that might be required. I have an assortment of old solid copper soldering irons that I acquired years ago, the kind that you heat in a torch or on a stove and then the bulky copper mass stay warm for a good long time. Since they use no flame, and hold they heat really well, they are an ideal choice for soldering a steel tank. Start by tinning the area with some good quality soldering paste and flash a coating of solder about the area. A very clean, thin, steel patch can now be placed and fully soldered to cover any large holes. Pin holes can normally be soldered only with a dollop. Check it for leaks before moving on.

To finish it, slosh it with some lacquer thinner and that will work to drive the water out of any creases or seams. If you're not going to use the tank right away, I like to swirl a few ounces of diesel fuel to oil the inside so no further rusting can take place. If you want to use it right now, rinse it with a few ounces of gasoline and let this run out. It will take any last vestiges of water with it and you should have a very clean tank. If you want to paint the outside, you might have to re-arrange the order of the steps.

Here a couple of shots of an "H" tank that I used this process on. I thought it turned out well.