

Electronic Tool Tip #26 – Tap Magic

I recently had occasion to drill and tap a *lot* of aluminum heatsinks. Now, I have been machining metals in one form or another for well over fifty years, though I never did it on a large-scale basis, but always as an adjunct to my main occupation. For many years, I worked in the heavy truck maintenance field. One particular job that I dreaded, which we had to do more often than I liked, was the replacement of chassis side rails (what we called *frame rails*). That's right – we would cut off the Huck® fasteners or rivets used at the factory to secure the frame rail(s), support all of the cross-members and attachments, and pull the rail(s) out with a forklift or a block and tackle off another truck. We would then slide in the new rail(s), and that's when the fun part began. We would next have to mark and drill *all* of the holes in each new rail for securement of every cross-member, bracket, and attachment. Needless to say, it was a major undertaking, usually using a magnetic drill press as an aid. That was when I learned about the Tap Magic product line.

Tap Magic is a product line offered by the Steco Corporation of Little Rock, Arkansas. Steco's Tap Magic division produces a total of thirteen different metal machining assistive products, not the least of which is the *Tap Magic Aluminum* product that I used for the heatsinks.

Use of a cutting fluid aids in the drilling and tapping of metals by both lubricating and cooling the cutting tools, whether they be twist drills, hole saws, or taps or dies. Use of a cutting fluid prevents galling, spalling, and binding of the cutting tool as well reducing wear on that tool, thus extending its useful life.

There is a Tap Magic product for almost any imaginable metal machining task, including standard, biodegradable, and food-grade qualified products. I keep a bottle of the *Tap Magic Aluminum* and the *Tap Magic EP-XTRA®* products on hand at all times. The *Tap Magic Aluminum* offering is excellent for all soft metals, including (of course) aluminum, brass, copper, and bronze. The more expensive *EP-XTRA®* product is especially well suited to the harder metals, including cast iron and stainless steel.

Both of these products are available online from a number of suppliers. As may be guessed by now, I shop quite a bit at Amazon, and it was no different here. The *Tap Magic Aluminum* is available in a sixteen fluid ounce bottle at a price of \$15.99 (USD) plus shipping. The *EP-XTRA®* is available in a four fluid ounce bottle at a price of \$9.99 (USD) plus shipping. Of course, the government has

to get its share, so tax will also be applied. Point your browser to <https://www.amazon.com/Tap-Magic-20016A-Aluminum-Yellow/dp/B00065VEUO> for the aluminum product or to <https://www.amazon.com/Generic-Tap-Magic-Cutting-Fluid/dp/B0D9WSDY41> for the hard metal product if you want to investigate these items for yourself.

