

## Tool Box Essentials: Marking, Drilling and Deburring Holes

by Team Skunkworks

We use many types of tools--hand, electric, pneumatic, etc.-- during the course of making repairs, doing upgrades or preparing our Kasperwings pre-flight. In this article, I will touch on some of the tools I find essential for drilling holes in aluminum tubing or plate.

**Marking Tools:** We have had good luck using the Sharpie pens for marking on aluminum, even if the tubing is slightly dirty.

**Locating Tools:** After you've measured and located for a drilled hole, it really helps to keep the drill bit from wandering if you use a centering punch. I find that I'm more accurate with the automatic type.

**Deburring Tools:** Deburring tools are a handy way to clear away sharp strands of aluminum created by the drilling process. The shape of the cutting blade (tip) in conjunction with the swiveling head allows you to quickly bevel the sharp edge of the drilled hole. Equally important on drilled tubing, the shape of the blade can catch the burr on the inside of the tube. This is very important, especially if you plan to install plugs or inner sleeves. In addition to cleaning up drilled holes, a deburring tool is a quick way to clean up the inside end of a tube after it's been cut to length. Note: To quickly debur the outside edge of a drilled hole in tubing or plate, a good quality counter sink chucked in a hand drill works fairly well if you have a good eye and steady hand.

