

## Calendar

### April

**4** EAA Chapter 1129  
**Regular Meeting.**  
Tamarack Air Hangar, 6:30 pm

**19-21** Fairbanks Outdoor  
Show, Carlson  
Center.

### May

**2** EAA Chapter 1129  
**Regular Meeting.**  
Tamarack Air Hangar, 6:30 pm

**18** Fairbanks Aviation  
Day and **Young  
Eagles and EAA  
Pancake Break-  
fast**

Next Meeting:

**When: Thursday, April 4 at 6:30 pm.**

**Where: Tamarack Air Hangar at 3900 University Ave S.**

**What: Salvaging the B25**

## President's Hot Seat

*Rick Crisenbery*

I thought spring was here but after 19 years in Fairbanks I should have known better. I just got in from plowing about 5 inches of the white stuff out of the drive. I am certainly hoping that is the last time for this winter (Spring?).

Speaking of Spring, there are two more events up for the chapter this season. The strategic planning committee is attempting to implement a plan to increase our exposure in the Fairbanks area. We are trying to line up a booth at the outdoor show for this purpose. If we are able to do this we will need, guess what, volunteers to man the booth. So if you are planning to go to the show anyway, why not contribute a few hours of your time to help the chapter in exchange for getting into the show for free?

Our other spring event will be the pancake breakfast and Young Eagles flights to be held in conjunction with FAD. This event will move from the Sadler hanger to the new Hutchinson Aviation Hanger on the East Ramp. We will be asking for the usual group of workers for the pancake and lunch feed and workers and pilots for Young Eagles. Contact anyone on the board or Young Eagles Coordinator Terry Wighs to volunteer to help out.

Pat and I will be visiting family during the April meeting but it will feature a presentation on the efforts of the Aeronca museum in Michigan to recover the fuselage of a B25 that came down on a sand bar in the Tanana river. These folks can use plenty of local support in the form of knowledge, housing, and logistics so if there is anything you can possibly do to help, please come to the meeting and meet Todd and Patrick.

Hope to see all of you at our next meeting on April 4th

EAA Chapter 1129  
Web Site:

<http://1129.eaachapter.org>

Or check us out on  
Facebook!

<http://www.facebook.com/EAA1129>

*EAA Chapter 1129 Mission Statement:*

**Build, restore, innovate and educate to preserve Alaska's aviation heritage, and to promote Alaska's aviation future.**

## Drills and Taps and No Dope Slaps

*Rick Crisenbery*

The first thing top know about drilling and tapping is recognizing that most of us don't know it all. Therefore get some reference material. There are several sources of such material on the internet and if you google "drill chart" or look at MSC's online catalog under technical information, you can find a handy reference that will tell you what size drill to use for what tap as well as providing fraction to decimal equivalents. If you are computer challenged just give me a call and I'll get you a copy. The second thing on the list to know about is to use the proper lubricant. While lubricant helps with drilling, especially in hard to drill materials, it is mandatory in tapping. Not too long ago there was an article in Sport Aviation advocating that if you didn't know what lube to use in tapping to do it dry. Frankly, I can't think of worse advice. Short of a major snafu or working in cast iron, dry is about the worst thing you can do. So for steels use any of the conventional tapping fluids, sold at places like AIH, and for aluminum something like LPS No 2. If you want a more grease like lube for tapping aluminum, that will trap the chips on the tap, use Crisco.

For drills themselves you have lots of options. You can get short drills called screw machine drills, standard length or jobber and extended length drills in 6 and 12 inch lengths. The latter are especially handy if you can't get the drill close enough to your work due to an obstruction. By running the drill motor with one hand and guiding the drill with the other you can almost drill around a corner with a 12 inch drill in small sizes like a #40 or #30. The next thing you need to consider is the point style. There are two common point angles and two common styles. Included angles of the point are normally either 118 or 135 degrees. The 135 tends to be a little more durable due to the stronger corner where the point intersects the flute. Point styles are typically either a chisel or conventional point and a split point. The chisel point tends to walk on the material and doesn't cut while the split point doesn't have the center chisel and cuts easily and greatly reduces walking across the work.

Next a quick word about drill materials and coatings. Common drill materials are high speed steel and cobalt steel and they come in plain, black oxide or with

various magic coatings. If you are buying a complete drill set for all around use, I'd recommend the black oxide high speed steel. If you're getting a specific size for special job or multiple drills of the same size, like the commonly used #30 or #40, then consider a cobalt drill, especially if the plan for that drill is a lot of work in 4130 or stainless. As to the various bright gold coatings, save your money. Small drills aren't readily sharpened with any accuracy and once you re-sharpen a larger drill the coating is gone from the pointy end anyway.

So now that you have your drill picked out, you're ready to go, right? Wrong! There are two more things you need to consider. How fast you are going to run the drill and of course you center punched the hole, right? The center punch is used to give the drill a place to start without walking across the work. When I lay out work to be drilled, I first use a prick punch to mark the location then I go back with a center punch, which enlarges the punch mark and flattens the angle to more closely match the drill point. On thin sheet metal you need to be very careful not to dent the sheet. Back up the work with something like a piece of steel plate or use a smaller hammer. As to speed, there are two things to remember—the smaller the drill the faster it should run and the harder the material the slower it should run. Here are some speeds from one standard speed and feed table for a #30 drill. Steel—1,800 rpm, aluminum—15,000 rpm and 304 stainless—1,100 rpm. You will note that most of us don't have a drill motor that runs at 15,000 rpm, so my practical advice is to use an air drill for aluminum and your cordless for steel. Typically air drills run around 2,500 rpm so that is too fast for steel but ok for aluminum.

Lastly don't drill a large hole without a pilot hole first. I keep lots of #30 drills around and use them for pilot holes for larger drills. How big is a "larger hole"? If I am using a hand drill vs. the mill or drill press, anything larger than the #30 gets a pilot hole first in my shop.

So now you have the hole and have chamfered it to remove the burrs. By the way, a single flute chamfer tool tends to chatter a lot less than multi-flute cutters. Also run these tools very slowly, like around 150 rpm or less.

The editor has informed me this is going over my allotted space so next month we will cover tapping and help you avoid those dope slaps.



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Of course, you are always welcome to attend our meetings and other gatherings, such as our Annual Banquet, Summer Picnic, Pancake Breakfast, even if you choose not to join!

Membership chair: Pat Crisenbery. Phone: 474-3971, email: [crisen39@gmail.com](mailto:crisen39@gmail.com).

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