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## The Future of Amateur Built Aviation - We Need to be Better Than Certified

A few weeks ago I suggested that readers pick an electrical powered system they'd consider critical to flight and postulate the ways in which that system might fail and how it would be dealt with in flight. I was getting a lot of responses until someone posted a note alluding to everyone "falling for Bob's trap" and the messages slowed to a trickle. By-in-large, the responses I did receive serve to illustrate the fact that most airplane drivers and only a few more airplane builders have really thought through the failure modes of ANY systems on their airplanes nor have they worked out methods for either (1) reducing the possibility of event (2) or having plans in place for dealing with any failure in a comfortable manner. I'll suggest the issues surrounding my test exercise go much further than having to decide between two kinds of hardware used to fabricate your airplane . . .

Given that most of us learned to fly in the padded-cockpit environment (all aspects of fabrication, utilization and training blessed by Washington) I can understand how easy it is to turn so much responsibility over to someone willing or (worse yet) mandated to do our thinking for us. At a "Meet the Administrator" meeting at OSH 97, acting administrator Valentine made the statement, "Experimental aviation's accident rate compares favorably with that of certified aviation . . . keep it up folks and we'll stay out of your hair." I take that to be both compliment and warning. Believe me, as I write these words, there are people within the FAA looking forward to the day when the airplane you're building will receive the same "blessings from above" as a C-172.

I'll suggest that we have an opportunity to make our accident rate BETTER than certified aviation but we'll have to stop behaving like certified pilots . . . As certified pilots we're not expected to know any more than the approved training

syllabus and subsequent multiple-guess test requires. As builders, you all have signed up to the task of learning to do some new things ranging from materials procurement to flight testing . . . one-man aircraft factories. It's not easy or everyone would do it. Obviously, an expansion of you knowledge base would be useful. Teaming with other builders with common goals is a good way to do that. Tapping the knowledge and experience of outsiders willing to share is another way. It's all part of the "networking" advantage. Yes, it takes time. It will also challenge you to re-think things you've assumed were carved in stone. It's pretty difficult to sit calmly while foundations of long held beliefs are chipped away.

The watchwords are "change is good . . . when performance goes up while time and dollars to implement it goes down." If this concept were ignored, the Vari-Ez, RV, Cozy, Europa, Kitfox, (you can name 'em) would never have come into existence. But those guys are just airframers, how about the power plant folk at Rotax, NSI, etc., etc. Then we have the panel mounted stuff from Matronics or how about the hand held accessories from Garmin and Magellan? Who would have believed as few as 3 years ago, you could buy a perfectly good GPS receiver for airplanes at a sporting goods store for \$100?

Who's working on the airframe systems? I for one have some experience and suggestions in that arena. Given all that's going on elsewhere in amateur built aviation, I'll suggest we're doing something wrong if cost and performance of our electrical systems are not also evolving in the same positive ways. You can buy a better computer next year for the same dollars as this year, why not electrical system components and techniques for your airplane? Why indeed. This is our

mission at the AeroElectric Connection. I have to accept the fact that some people will be upset by things I'll write but until someone can show me where it's wrong, I'll stick to the concept. Change? You betcha! Our designs and products are changing all the time mostly based on what we discover as a result of discussions with folks on the lists; I'm 54 years old and learning every day.

From time to time, I may come off as a bit wild-eyed and it's a sure bet that some people are going to feel abused or picked on. Please know that I take no pleasure in the discomfort of others. I'm very enthusiastic about amateur-built airplanes; in fact, I'll go so far as to suggest that amateur built airplanes are the future of personally owned airplanes in this country. I'll admit to coming on pretty strong so I'll suggest the best defense is a good offense. This isn't a popularity contest or even a battle for supremacy rather a debate based on facts.

Let's go at it guys! I'll shake hands coming out and I'll be ready to shake hands walking away but let's do this to get smarter and better at what we do . . . lest one day a new subscriber to the list writes, "Hi, I'm with the FAA . . . and I'm here to help you." The FAA would be perfectly happy to have you cloning a 1970 C-172 . . . how happy will you be?

Bob . . .

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