



Left Seat: Time to Fly!



Just about the time it turns warm enough for the pollen counts to rise in Nashville – my itchy eyes tell me that is the last week in March – the gray skies give way to bright sunshine and

intermittent showers, vigorous breezes, and puffy cumulus clouds. Many an aerial steed that has spent most of the cold months in the barn is brought out to celebrate the rites of Spring. It's a great time to be a pilot and reacquaint oneself with the joys of aviation. Chapter activities also ramp up in the Spring and Summer, and in addition to our monthly meetings on the third Wednesday we will be having Birds of a Feather outings on Saturdays in the coming months that should be a lot of fun. These include a variant on the ever-popular Poker Run competition, a "Fly Me Out to the Ballgame" trip to St. Louis for a Saturday baseball Cardinals game, and a day of glider flying later this year at Puckett gliderport in Eagleville.

Springtime also means lots of violence in the atmosphere. During the last week I've had the opportunity to fly my RV-10 on two trips to Washington DC and one to Pittsburgh, with a total of about 14 hours PIC in the logbook. On all of those trips there was at least moderate turbulence over the entire Eastern US that was forecast up to 8000 feet but actually extended up to 11,000 feet. I

kept asking Center for higher altitudes to escape the turbulence, and all of the eastbound segments of those flights ended up being at 13,000 feet which was the lowest smooth cruising altitude (and not quite above the cloud tops as I got further East). Over West Virginia there were snow showers visible below and a bit of rime ice in the cloud tops, and beautiful rainbows where showers were spotlighted by the late afternoon sun. I was happy to have a bird that flies comfortably in the mid-teens and has oxygen available, but heard lots of other GA travelers having an unpleasant day in the bumps, headwinds, and IMC conditions at lower altitudes.

Weather awareness and avoidance takes on additional importance during the Springtime season when the jet stream often dips far to the South, setting up collisions between cold Canadian air and moist air from the Gulf of Mexico. These are the few weeks of the year when Tennessee becomes tornado alley, as 2009 demonstrated again recently. Having NexRad weather aloft is a big help to pilots, but not a panacea, as discussed in this month's article by Peter Cassidy entitled "The Boundary Between Strategic and Tactical."

Weather awareness is a big factor in Spring flying safety, but equally important is pilot proficiency. Each year it is possible to mark the change of seasons not by knowing the weather conditions, but by looking online at the number of daily FAA accident reports. They start increasing in March out west and down south, and move eastward and northward as predictably as the northward migration of the jet stream. Fuel contamination, loss of engine power, and loss of control on landing play year after year as markers of both planes and pilots who took a

few months off and got into trouble when venturing out again for the first time. Knocking the rust off of skills that have laid dormant over the cold weather months may take more than a few flights, and can be greatly accelerated by spending an hour with a CFI just going over the basics and getting an independent assessment of your overall proficiency level.

As we swing into high gear for the 2009 program of activities, we want to invite you to c'mon down to any of the Chapter activities, and bring a friend! Fly safe, fly happy, and we'll see you soon!

Dan Masys
2009-10 President, EAA Chapter 162

On the Horizon: calendar of events

2009 features programs on *Wednesday* evenings--generally the third Wednesday--of each month, and Saturday "Birds of a Feather" outings. The calendar is subject to change, however, so for the latest check the Chapter's website at www.eaa162.org

Date	Event Name	Location	Presenter/Leader
Apr 21 - 26	EAA Sun 'n Fun	Lakeland FL	
May 20	Experimental Aircraft Electrical Systems	JWN	Brian Sutherland
May TBD	May month-long Poker Run	Various	Shelby Smith
June 17	Aviation Physiology: Spatial Disorientation and Vertigo	JWN	Dan Masys
June 20	Young Eagles	JWN	Brian Deno
July 15	TBD		
Jul 27 - Aug 2	EAA Airventure	OSH	
Aug TBD	Fly Me Out to the Ballgame: St. Louis Cardinals home game	Bistate Parks MO	Bill Hetzel

Date	Event Name	Location	Presenter/Leader
Aug 19	Radial Rocket progress	Hawes home	Andy Hawes
Sep TBD	Glider Flying at Puckett Gliderport, Eagleville, TN	50M	William Dudley
Sep 23	Engine Monitors	JWN	Peter Cassidy
Oct TBD	Hands on workshop: Basics of Riveting	JWN	Masys and Sutherland
Nov 18	Survival Techniques	JWN	TBD
Nov 21	Young Eagles/Boy Scouts	MQY	Brian Deno
Dec 12	Holiday Party	TBD	Shelby Smith

For more details see www.eaa162.org.

The Boundary Between Strategic and Tactical



Data link weather in the cockpit is a big hit with pilots for good reason. It does for weather awareness what the GPS moving map does for navigation.

It's not uncommon to hear pilots consider it a no-go item. I've been flying with it for over three years and I'm a firm believer. I make many flights now that I previously would not even attempt. The caveat is that it is a strategic flight planning tool and should not be used for tactical maneuvering in weather. This is good advice, but it needs clarification to be useful.

Consider NexRad. How close to the nasty stuff should we allow ourselves to get before the inherent errors in the system make it useless? At what point does it become hand-to-hand combat requiring real-time tools like onboard weather radar or spherics

(Stormscope)? A common rule is to keep 20 miles away from storm cells. We can do better than that with NexRad. I use a 12" tablet PC with high quality graphics. I can zoom in to street level resolution. Unfortunately, while the GPS and geographic resolution might be that good, the weather data is not. There is always a delay in what you see on your display versus what's actually happening. Scott Dennstaedt, in the September 2008 issue of IFR, has the best discussion I've seen on how weather data is prepared and broadcast. He says the view you're seeing is 4 to 8 minutes behind reality. So a cell that's clipping along at a good rate could move 4 or 5 miles by the time you reach the spot where the cell is shown. That correlates with my experience and I don't get closer than 5 miles to a cell. If there is the potential for hail, that's way too close.

A more challenging situation is dealing with air mass thunderstorms. Cells can build in 10 minutes. Just because there is nothing showing on the display does not mean you won't get thrashed around. I've had it happen. My strategy is to monitor activity carefully to get a feel for the pattern of what's happening. This usually works but requires a lot of head down time. An autopilot or a good copilot is your best friend in this situation. I find that getting clear of clouds to avoid buildups visually seldom works. You generally need to get into the high teens and that requires turbocharging.

This discussion has been about dealing with convective activity. The other major weather challenge, icing, is getting some help now that WxWorx has added CIP (Current Icing Potential) and other icing related enhancements. At an additional \$50 per month, it's not something I plan to subscribe to though you can see the obvious benefit compared to icing Airmets and the same strategic vs. tactical consideration applies.

The above discussion assumes you are getting regular (5 minute) weather updates. Unfortunately the availability of data link weather leaves a lot to be desired. I don't lose it often, but it does happen and sometimes when I need it the most. You need a plan should the system let you down. My Stormscope is my backup for NexRad. The ride usually isn't as smooth, but it keeps me away from the really nasty stuff. Over time we can expect service availability to

improve, but for the foreseeable future, if you're going to reduce the limits using data link weather, a back-up is a must.

Peter Cassidy

FAA examines homebuilt safety

EAA publishes a newsletter called "Safety Wire" for EAA Technical Counselors, and the April edition had a provocative article about overall homebuilt safety trends. That article is reproduced here in its entirety with permission, as it has implications for the process of choosing which plane to build (which was not an easy decision in any case, but is potentially made more difficult if one does an assessment of how safe any particular design has been in the hands of the pilots who fly it.)

Amateur-Built Safety – an Update

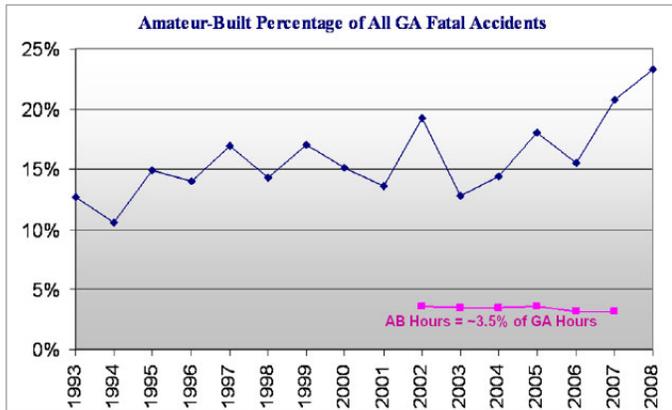
Joe Norris

EAA Homebuilders Community Manager

In February the FAA and EAA met in Oshkosh for what has become an annual "summit" meeting to discuss issues that are of interest and importance to EAA members. One of the main topics of discussion at these meetings has always been safety, with amateur-built aircraft safety being a major part of that discussion. This year's "progress report" from FAA brings to light some interesting and valuable statistics. Let's take a look!

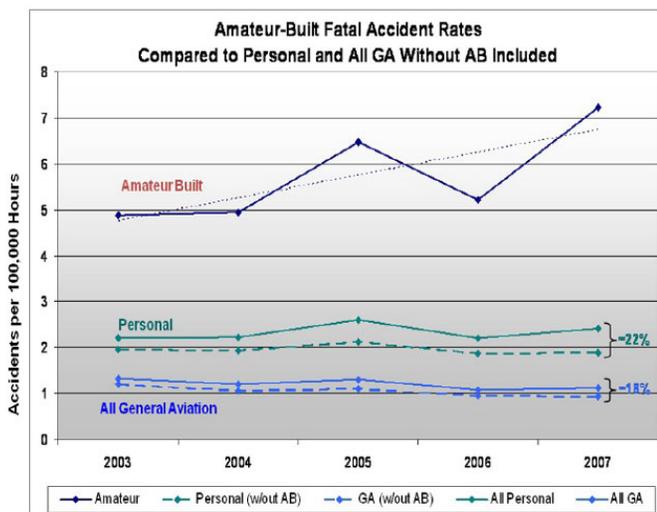
You all may remember that this past year marked the major milestone of 30,000 amateur-built aircraft on the FAA registry. FAA reports that this number represents approximately 10% of the total US fleet. However, amateur-built aircraft are involved in almost 25% of the fatal accidents while flying only 3.5% of the total General Aviation flight time.

One of the standard measures the FAA uses when looking at aviation safety is fatal accidents per 100,000 hours of flight time. When looked at in this way amateur-built aircraft have made great improvements over the years, generally getting closer to overall GA numbers each year. But this trend has flattened out and in fact has started to go in the wrong direction in the past few years. The amateur-built rate bottomed out at around 5 fatal



accidents per 100,000 hours in the 2003-2004 timeframe (as compared to about 2.3 fatal accidents per 100,000 hours for GA overall in the same timeframe) but has crept up slightly in the last few years. In fiscal year (FY) 2007 the amateur-built rate was just over 7 fatal accidents per 100,000 flight hours after coming in a 6.5 in 2005 and about 5.2 in 2006. These numbers make the trend line move in the wrong direction, which has gotten the attention of the FAA.

The data showed that the number of amateur-built fatal accidents over the last three years were as



follows: 47 in FY 2006, 66 in FY 2007 and 70 in FY 2008. The FAA looked at these years individually and collectively, and found many similarities. The main thing that jumps out of the data is that a large percentage of accidents in all three years was due to loss of control; 40% in FY 06, 46% in FY 07 and 47% in FY 08. Also of note is that overall the

fatality rate is much higher in amateur-built aircraft. In the FY 06/07 timeframe 27% of all amateur-built accidents were fatal as compared to 18% for GA as a whole.

Finally, the FAA broke down the accident data to identify the accidents by kit producer. They highlighted the top 4 kit lines to see how they compared to the overall amateur-built fleet. Let's take a look at the data for FY 08:

FY08 Amateur-Built Accidents

FY08 Amateur-Built Accidents (NTSB + Duty Room)

Make	# of Aircraft	% of AB Fleet	# of AB Accidents	% of All AB Accidents	# of AB Fatal Accidents	% of All AB Fatal Accidents	Fatal % of Make's Accidents
Vans	4,548	16.2%	39	14.1%	13	18.8%	33.3%
Lancair	895	3.2%	19	6.9%	11	15.9%	57.9%
Rans	572	2.0%	1	0.4%	0	0.0%	0.0%
Glasair	712	2.5%	2	0.7%	0	0.0%	0.0%
Top 4	6,727	24.0%	61	22.0%	24	34.8%	39.3%
All AB	28,029		277		69		24.9%
AB less top 4	21,302	76.0%	216	78.0%	45	65.2%	20.8%

You can see how the numbers track for the various kit producers, and also how these numbers compare to the overall fleet. Note also that the overall fleet numbers are given both with and without these top 4 producers included.

The main issue FAA has focused on is how the numbers for the Lancair designs stand out from the rest. Lancair designs comprise only 3.2% of the homebuilt fleet, but are involved in 6.9% of the total accidents and almost 16% of the fatal accidents. Even more notable is that almost 60% of Lancair accidents are fatal. These numbers have caused the FAA to take a closer look at Lancair designs, and have also had a hand in the formation of the Lancair Owners and Builders Organization (LOBO) that was featured in a previous issue of Safety Wire.

The FAA has formed a committee to look at amateur-built safety, and EAA is participating in this effort. You will see reports on this from time to time, either here in Safety Wire or in other EAA publications. The FAA recognizes that EAA's Technical Counselor and Flight Advisor programs do have an impact on amateur-built safety, and it's

up to all of us to spread the word about the value of these programs. Improving the safety record of amateur-built aircraft is something we all can help with, and will help to protect the privileges we've earned over the years. Keep up the good work!!

Editor's Note: EAA national members can download all of the Safety Wire issues at:

http://members.eaa.org/home/lookup/safety_wire

If you would like a Technical Counselor visit for your project, send a request to ea162@gmail.com

Sightings



And you thought your paint job was eye catching... Beware of flying Winnebago's with teeth!



Experimental Aircraft Association Chapter 162

MEMBERSHIP APPLICATION

Type (circle one): Reg Member \$30 Senior (65+) \$10.00 Youth \$10.00 Info Correction Only

Date: Name you would like on Badge:

Name: Last First Initial Spouse

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EAA National: Membership Number Expiration Date

Occupation: Retired

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Aircraft Project Underway: Percent complete:

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Special Skills that might help others:

Interest in chapter 162 activities: President Secretary Newsletter
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