



CHAPTER 42 NEWSLETTER

April, 2006

Anchorage, Alaska

Monthly newsletter from Chapter 42 of the Experimental Aircraft Association

FROM THE LEFT SEAT

Wasn't last month's meeting great? I still am in awe at all of the wonderful history and planes that we got a chance to see. Thank you to the wonderful folks at the museum and to Jack Brown for arranging all of the details.

Last month's breakfast meeting was once again delicious and entertaining. These monthly informal meetings just keep getting better, thanks to Mike and Donna Luther). Hope you can make the next one.

Here is some news from EAA National about the new EAA Homebuilt Certification Kit:

EAA's new Amateur-Built Aircraft Certification Kit includes everything you need to register and certificate a new experimental amateur-built aircraft. The 15-page, step-by-step Certification Guide walks you through the entire process—from getting an N number to the aircraft inspection—and provides samples of how to complete each required form.

EAA staff member and Amateur-Built DAR Joe Norris, who reviewed all of the materials included in the kit, commented, "Whenever I inspect an aircraft for certification, the paperwork is what causes delays more often than anything on the aircraft. This guide will make a homebuilder's inspection go a lot easier."

The certification kit also includes all FAA forms, Experimental sticker (in black), data plate, and a convenient placard decal sheet. Cost for EAA members is \$12.99 plus shipping. The kit is also available for non-members for \$19.99 plus shipping. To order, call EAA Membership Services at 800/JOIN EAA, or visit shop.eaa.org.

EAA AirVenture Oshkosh 2006 will finish High-Flying Opening Day with a Beach Boys Concert on July 24. After a full opening day of flying on Monday, July 24 at EAA AirVenture Oshkosh 2006, AeroShell Square will be full of "Fun, Fun, Fun" that evening as the Beach Boys bring in their sounds of summer, compliments of Ford Motor Company.

This is an election year for Chapter 42 and there will be some spots open for nominations. So if you have any desire to take a leadership role and shape the future of our chapter, please let me know. I would like to help you in your endeavor and make the transition as smooth as possible.

My RV-9 is progressing quite nicely. I am trial fitting the control sticks at the present moment and then I will take them out and store them. It seems that you get to build the RVs at least two or three times by the time you are finished. But ac-

ording to the plans I will soon be at the point where I can test fit all of the really cool parts like the wings, and tail feathers. My garage is not big enough for this so I have been thinking of moving everything out to the back yard. After that takes place then I will order the "Finish Kit" and buy a motor. Does anyone know where I can buy a Lycoming O-320, preferably an E2D model?

It looks as if spring has finally arrived and most of the snow is gone from my yard as well as the local airports. I see more and more light aircraft flying each day and the airports are buzzing with activity, I hope you are flying or building and dreaming of flying.

See you at this month's meeting,

Mike

NEXT MEETING

Our next meeting will once again be "Movie Night." Our first such meeting was one of the more popular events if the feedback we got is any indication. So, we are going to do it again. Our esteemed prez is in charge this month and will be choosing our feature movie presentations. I hear he has some good ones!

My Broker at RE/MAX has generously allowed us the use of the media/conference room again for this special event. If you have not been there before, here are the directions to RE/MAX Properties at 110 W. 38th Ave. From "C" St and Tudor go north, first traffic light is W 40th, take a right (east) and then a left on "B" St. You will be in front of the RE/MAX building. Main door is on the NW end of the building.

Popcorn will be served.

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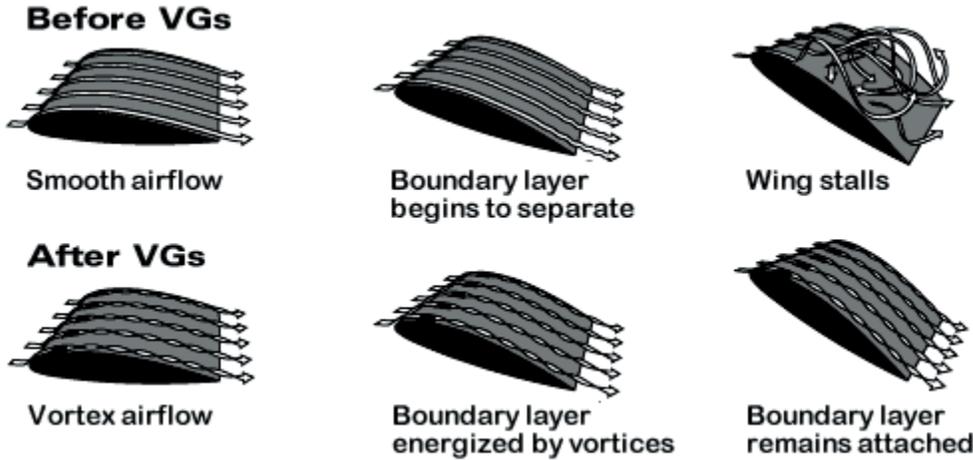
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If you remember last month we talked about boundary layer airflow and it's effects on the wings of aircraft. This month we will take a brief look at Vortex Generators and see how they work. Perhaps we can even separate some of the fact from fiction and make an informed decision before we spend our hard-earned money on snake oil.

What are Vortex Generators and what do they do?

The following is graciously provided by Micro AeroDynamics Inc.



Vortex Generators can be found on all sorts of products. You can get them on fins that you wear for diving or swimming. You can get them attached to a helmet and supposedly you will be able to bike or speed skate faster and more efficiently. Can this all be true? Can such an innocent looking device actually give us something for nothing?

Well my grandparents always said, "there is no such thing as a free lunch," but perhaps with Vortex Generators we are getting close.

Currently there are two types (perhaps more) of Vortex Generators available to us. There is the fixed type, which is fastened to the airfoil and does not move. And, much more exciting, the active type which can retract, extend, and move back and forth. But I will let FLEXSYS Inc. tell you in their own words.

"Active flow control techniques can be used to improve flow quality wherever flow separation is encountered. FlexSys is developing several types of active flow control systems for different applications including transonic, low Reynolds number, and active safety systems. All of these systems rely on static or oscillatory deployment of a mechanical disturbance into the boundary layer (typically 20 to 40 percent of boundary layer thickness). To avoid adding unnecessary drag, the flow control actuator is typically designed to retract flush with the wing surface when not in use.

Static deployment can be accomplished on-demand within a fraction of a second using signals arising from pressure data or control surface input. Static flow control devices deploy a disturbance, usually a vortex generator, that mixes high energy streamwise flow into the boundary layer, thereby strengthening the boundary layer and delaying separation."

Oscillatory flow control systems involve cyclic "on/off" actuation of the disturbance, which has the added benefit of improving flow attachment performance by generating vortex structures that "tune" with the existing boundary layer. This dynamic action can significantly improve flow control capabilities over static vortex generator designs. The challenge is to develop a compact, light weight, low power mechanical actuator that can oscillate the disturbance to the appropriate "tuned" frequency. Drawing on our knowledge of compliant systems, FlexSys has been able to develop innovative active flow control devices that meet these challenging design specifications."

Some day we will be flying in aircraft with shape morphing wings, wings that will actively change the shape of both the leading and trailing edges on demand. Imagine a wing that can react to the air currents like a bird's wing, always changing and adapting to conditions. Hmmm! What an idea. Out to the shop. *Where is that hacksaw?*



Restored wooden floats in the workshop at the Alaska Aviation Heritage Museum



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In the February newsletter I included information on registering your airplane. I have learned a few things since then, all good.

First, the online acquisition of an N number was very easy. You can go to the FAA website at http://registry.faa.gov/aircraftinquiry/NNum_inquiry.asp and instantly determine if the number you want is already taken. If not, it is potentially available to you for a one year reservation fee of \$10. You can submit your request and pay online with a credit card.

I believe I selected my number on a Wednesday night, paid with my credit card online and had my N number reserved by the following Monday!! What a huge improvement over the system of submitting your top 4 or 5 choices, mailing to FAA and waiting weeks to see if you got lucky. My new GlaStar will be registered under "55 XP". Short and simple.

Another pleasant surprise was the registration process. The information in the February article suggested it could take 90-120 days to get your aircraft registration. Yikes!! 4 months!! I was hoping to fly in June. I started asking around and checking the internet.

Someone told me about an expediting service for aircraft registration. I would love to give credit to whomever that was but I can't remember. My apologies to that nice person. There is a company in Oklahoma City that will get your registration through the system in short order. You complete your FAA registration package (available at the local FSDO at Anchorage Int'l Airport) and send to Federal Aviation Title Co at 4411 Highline Blvd, Ste 102, Oklahoma City, OK 73108 with a check for \$25. I hear they review your package and then hand carry it to the FAA.

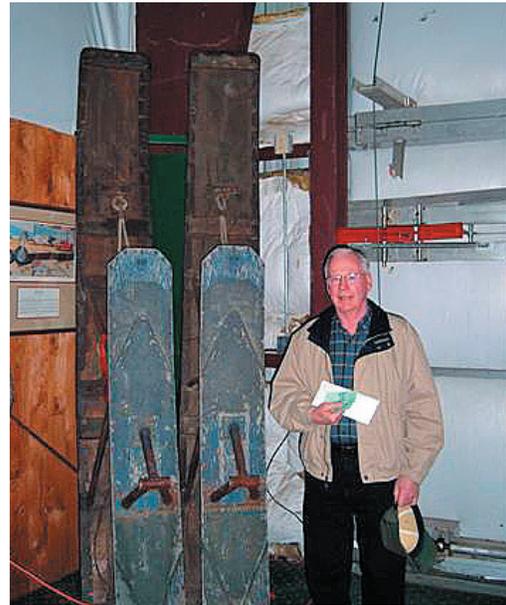
Fellow EAA member Jerry Rutowski and I completed our packages together and double checked our forms, got them notarized where needed and mailed off to Federal Aviation Title on March 14th. I did send by FedEx. I received my official registration in the mail the first week of April and Jerry got his a few days after mine. The date of issuance was March 30th!!! Way better than 90-120 days and well worth the extra cost of \$25.

GlaStar N-55XP may not be flying in June like I hoped, but it won't be the fault of the FAA bureaucracy and paperwork. That system has really been improved. Way to go FAA.

Final reminder: we are still searching for a volunteer to do this newsletter. Annie and I have been doing it for about 5 years and we were wondering if it is about time for some new blood with fresh ideas. We would be happy to coach anyone willing to take it on and give them a hand in the beginning. Anyone interested??

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MONTHLY MEETINGS	4th Tuesday of most months



Jim Moss with his raffle tickets next to antique wooden skis at the Alaska Aviation Heritage Museum



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**EAA Chapter 42
Monthly Breakfast
2nd Saturday of each month
Village Inn on Spenard Road
10am**

READ THIS contributed by Walter Yankauskas

Olly srmatt poelpe can...

I cdnuolt blveiee taht I cluod aulacly uesdnatnrd waht I was rdanieg. The phaonmneal pweor of the hmuan mnid, aocednrig to a rscheearch at Cmabrigde Uinervtisy, it deosn't mtttaer in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit plcae. The rset can be a taotl mses and you can sitll raed it wouthit a porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe. Amzanig huh? yaeh and I awlyas tghuhot slpeling was ipmorantt!

SOME JOKES

Taxiing down the tarmac, the jetliner abruptly stopped, turned around and returned to the gate. After an hour-long wait, it finally took off. A concerned passenger asked the flight attendant, "What was the problem?" "The pilot was bothered by a noise he heard in the engine," explained the flight attendant, "and it took us a while to find a new pilot."

Cessna: "Jones tower, Cessna 12345, student pilot, I am out of fuel." Tower: "Roger Cessna 12345, reduce airspeed to best glide!! Do you have the airfield in sight?!?!?" Cessna: "Uh... tower, I am on the south ramp; I just want to know where the fuel truck is."

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