≃EAA CHAPTER 32 NEWS≈

Jim Bower, Editor

March, 2002

NOTE THE MEETING DATE AND LOCATION CHANGE:

Due to winter weather, we will be meeting at the Old Country Buffet in St. Charles (I-70 South Outer Road near the Wal-Mart). The meetings will be on the **LAST SATURDAY** of the month, March 30. I say again, this is **THE LAST SATURDAY - NOT the 4th Saturday!** Meeting time is still 2:00 pm. Come early and have a nice lunch. In fact, we strongly urge you to eat there so the Old Country Buffet people will keep on letting us use their room! The meeting room is at the rear of the restaurant, and space is kinda limited.

We look forward to seeing you there! As in previous years, we will resume meeting at the hangars next month when the weather is (hopefully) a little kinder.

INFORMATION HOTLINE 286-9932

CALL THIS NUMBER FOR INFORMATION ABOUT UPCOMING EVENTS

Last Month's Meeting Report

February, 2002

Thanks to Tom Baker, Secretary

The February meeting was held at the Old Country Buffet in St. Charles. The meeting was called to order by President Stan Crocker at 2:00 pm. followed by the Pledge of Allegiance to the Flag. Stan welcomed our visitors Craig Chipley and Dennis Vogt's fiance'.

Hangar update: Stan Crocker reported that the building is coming along well and invites everyone to come see & join in.

Young Eagles: The Young Eagles rally will be held at Executive Beechcraft at Spirit airport.

Fall Airshow: Doug Killebrew reported that the fall airshow at Spirit Airport will again have the Blue Angels.

New Business: Ron Burnet and Ray Kennedy will take over the sale of the store coupons. Dave Doherty volunteered for Activity Chairman. President Stan said the Executive Committee will stay as is. The Committee will write out guidelines for the various committees. A report of the Chapter fly-out to Sikeston and the meal at Lammert's Restaurant was well attended.

A motion was made to adjourn and was seconded. Adjournment was at 2:30 pm.

Message from Al Donaldson

(Regional Young Eagles Coordinator)

Hello Young Eagle people of Chapter 32. It's that time again. Like where we are and what we gotta do to get where we are going. The EAA Eagle office says we have flown 770,000 Young Eagles since its inception in 1992. That leaves 230,000 to fly before 17 Dec. 2003, the 100th anniversary of the Wright Brothers' flight. The million Eagles flown by that date is very attainable. EAA has 30,000 pilots flying Young Eagles. If each pilot flys 10 Eagles we will exceed our goal and that could be accomplished this year. I would like for every member to make an effort to help each Chapter 32 pilot fly at least 10 new Young Eagles this year. The real work to fly the Young Eagles is the recruiting, the paperwork, the briefings, scheduling of time, place and dates.

The payoff is when you see the happy face of a child telling parents of their 1st ever airplane ride. Our first Young Eagle Rally will be the Charles A. Lindbergh Young Eagle Rally at Spirit of St. Louis Airport, Saturday 20 April 2002. A proposed six rally schedule has been developed and when the dates are firn it will be published. And don't forget, we have a hangar to build also.

Blue Skies, Al Donaldson

Don't miss Phil Kitchen's article elsewhere in this issue!

Wants and Disposals

"Sunburst" ultralight. Asking price is \$1,500, and that includes an extra engine for parts. If interested, call David Doherty at (636) 240-5982.



Hangar Partner Wanted

Don Doherty is on the waiting list for a hangar at Smartt. He would like to have one or two partners lined up (depending on aircraft size). If you're interested, please call Don at 636 397-4713.

A barber gave a haircut to a priest one day. The priest tried to pay for the haircut, but the barber refused, saying, "you do God's work." The next morning the barber found a dozen bibles at the door to his shop.

A policeman came to the barber for a haircut, and again the barber refused to be paid, saying, "you protect the public." The next morning the barber found a dozen doughnuts at the door to his shop.

An airline pilot came to the barber for a haircut, and again the barber refused payment, saying, "you fly the public safely all across the world."

The next morning the barber found a dozen pilots waiting for a free haircut.

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So You're Going To Buy A Kitplane... (part 2)

...Never Trust A Salesman, Part 4...

Building time: Only 700 hours... Ask people who are building the kit. How good are the instructions? How much can they get done in a weekend?

Start with the basics: How many pages are there in the manual? How about the blueprints? That 700 hours may be reasonable for a retired engineer who is used to reading blueprints and can continue to work the whole week through without interruption ... or for those who feel it is okay to do an okay job on something that in many cases will take at least four years to do, cost \$70,000 and all of your spare time to complete — and be something that you will trust your life to.

If all of the above is okay by you, and you're an aeronautical engineer, an A&P and an avid hobbyist, maybe that build time applies to you. But this is *your* airplane. You will not have the luxury of saying "it could have been better but this is just the prototype" and it's likely that you'll spend about 100 hours just shopping for the right paint and upholstery for your dream machine (amenities that are not often included in build-time estimates). Even ordering the right parts and having them arrive at the right time is not as easy as it looks. A lot of mistakes can be made when doing something for the first time, and they often are.

Continued

...You Get What You Pay For — Usually...

There are no deals in this or any market. It is generally very competitive, with many similar designs fighting for the same market segment. If one design is significantly less expensive there is probably a good reason. "Reasonable" reasons include: differences in materials used, e.g., high-temp pre-preg vs. wet lay-up; aircraft grade vs. hardware store-quality hardware; manuals and blueprints vs. instructions and pictures; prefab vs. "here are the raw materials."

Look into things carefully. There is a wide range of kits out there and your airplane may come in a kit that is not right for you. But skills you can learn and time you can make. These things can be overcome.

...Consider Your Workspace...

Be aware of the space needed for storage as well as work. Certain tasks in kitplane building take as much or more time in preparation as they do in physical work, and this aspect is magnified if your space is small and you must "make space" to work. These constraints become especially apparent when the only time you have is the weekend. As a rule of thumb, a good amount of space is twice the space needed to store the aircraft comfortably when completed, although you can get by with half that.

Also, is there a significant other in or near the workspace? Better cut that free time in half. Sprinkle in a good dose of clean-up time, too, if you'd like them to remain significant and not just other. Your mileage may vary....

...Factory Support...

How much guidance will you need? Be very honest with yourself and very generous with your estimate. If you are unsure of yourself at any stage of the project, will you need affirmation before moving on? Find out what incarnation the support system has taken back at the manufacturer's end. Do they have a system or department to deal with builder questions? Is there an 800-number you can call? Or is it

"we're usually around to take your call"? You are more than welcome to ask the company, but find out from the builders. Always find out what the results are from the receiving end of the equation.

...Tools Required

Only simple hand tools, right? What does that do to the build-time estimate? Did they build the prototype with simple hand tools? It's worth asking, but be specific and accept specific answers only. There's a difference between an air-powered hand tool and a hand-powered hand tool. Whatever anyone says, the more money you spend on tools, the less time you will spend sweating.

Make a list of what you need and make a separate list of what would be handy to have if you had the cash (you may need to seek out help to make sure the list is complete — ask several builders). The actual making of the lists not only forces you to differentiate, but it also provides you with an item to circulate to your EAA buddies — aside from giving you an idea of what you're getting yourself into. Don't worry, you will probably be able to borrow the more expensive/less frequently used items. What's more, most of those tend to come with a ready step-by-step explanation and a tutor who will have a vested interest in your using the tool properly for the best results (read: not breaking it). They feel good for being able to teach, and you get the job done by someone who knows what they're doing. It really does work very well.

If You Choose To Build

Advice: Seek As Much As You Can At Every Stage...

There's no need to reinvent the wheel. Getting a lot of advice has many good side effects. For one, you create ties within the aviation community. Another is that you will get better at distinguishing the enthusiasts from the genuinely informed — a handy talent.

Continued

...Looking Silly...

You don't have to look like you know what you're talking about. And if you don't know, it's better to admit it and make that obvious to everyone now, rather than have it become evident later when your project is done and "less than perfect." Besides, the more different techniques you make yourself aware of, the more likely you are to find one that best fits you and the more able you will be to modify it to suit your needs as you learn.

...Know When To Say When...

As you go about building your aircraft, you will find yourself getting better and better at solving problems and creating solutions in increasingly complex situations. It's exciting at first, and draining, but later it can become addictive. Sooner or later your skill level has risen to the point where you can fix just about anything you mess up and figure out any problem that arises. You become a very powerful person when you have gotten this far.

The obvious trap? The problem is not how to see a certain series of steps through. It becomes stopping yourself from fixing things when the better solution is to scrap it and start over. It is not always easy when you've gotten yourself all wrapped into problem-solving and finally worked through a solution. The key is to step back and reassess things: There will be a great ego boost if you figure it out or fix it and make it work the first time. But would it be better for the airplane for you to start over and make it perfect the "second time?"

...Don't Be Bullied...

Aesthetics:

A lot of outside influences will offer advice on how to do things ranging from how to drill holes, to how to fill and prime, to what your airplane should look like. Remember, your free time is on the line (waste as little of it as you can). This is your project and it should look how you want it to and be done in a manner you feel good about.

Advice is good. Doing something you're not comfortable with — at any stage in this game — is not!

Physics:

Most important, your life is on the line. Do not spend any time listening to people who have good modification tips, unless they are the designers. Even then, make sure it has passed the eyes of an engineer well-versed in these matters. And, do *not* let the manufacturer pass off production flaws as okay. It can be very tempting to give in to their superior experience, but this is your airplane and it is your responsibility to get at least the highest quality practical. This is one place where you shouldn't be shy about sending the bad soup back to the kitchen.

Myth:

The designer created it and any change he makes must be okay. The truth is that the designer drew it, and told the engineer how he'd like it to hold up to what kind of punishment. The engineer is the guy who makes sure it won't fall apart until those limits are exceeded. This is not something to mess around with. At all.

...Be Careful Out There!

The way things are set up right now, any Mary or John can sell kitplanes, and you will sign your life away when you buy one. But remember, when the FAA comes by and says it's airworthy they won't be dropping a single sandbag to see if that wing can hold it — let alone the 7 g's the manufacturer says it will. Be careful. Most young kitplane companies cannot afford to break their prototype to test their computer-designated load parameters. Some have not even done static load tests of components to their stated limits to see if they hold up.

Continued

In most cases, the ultimate load of your airplane is a computer-generated number that the kitplane manufacturer has divided by 1.5 or 2 to allow a good safety margin. It is an industry standard and a good practice. That method does not, however, take into account the possibility that actual construction methods, materials, or techniques could somehow be flawed. Especially because all of those things tend to get changed as the company streamlines its manufacturing/production process. In other words, even if they did break their prototype it is quite possible that your aircraft is built differently, or has a number of different or altered components from that of the prototype. Regardless, you don't want to be the one to point out the fact that things have changed by splattering yourself across a cornfield. The information won't be of much use to you then anyway. Buy a proven design from a proven company with a good track record; there are plenty out there.

Reasons For Building

If you're building because you can't afford buying, maybe you should rethink things. Remember that if your dream plane is more expensive than you can afford, you probably could afford it if you spent your weekends working overtime at your job or picked up a second job. The more expensive projects (fast glass) are going to take you about five years to complete with project costs hurdling \$70,000 with ease. There is a lot of money you could make in five years if you are creative, resourceful and devote your energies to it. You are creative, resourceful and energetic, aren't you? You were planning on working your weekends, weren't you? If you are simply looking forward to the building process, there is nothing more to say.

If you've made it this far, you deserve a taste of the upside. Building is a working experience of unparalleled reward and self-empowerment. It is the creation of your dream through your own hands, put to the harsh test of reality. In one monumental effort you create what existed only in your highest hopes and ambitions. It is like flying. There will be no excuses at the end of the day. There will simply be you and what

you've done. And the truth of its excellence and failures will be manifest for all the world to see. You will have tackled a project — an event, really — of such magnitude few others would dare consider it possible. You have indeed made your dream come true. And that makes your reality special — to you and everyone.

— Glenn Pew

Glenn Pew (gpew@avweb.com) earned his private certificate in 1991. His history includes service in production design and quality assurance for two companies that develop and produce experimental aircraft. He's produced aircraft parts for distribution, public display and as samples for the acquisition of government contracts. Glenn has also worked as a consultant for homebuilders of composite aircraft and was employed to create raw footage for a video construction manual. As a Research Editor for Boardroom Inc., a direct-mail newsletter and book publisher, Glenn works with a team of experts and freelance writers to hone useful copy for the masses. He also edits a section of Boardroom's Web site. Glenn lives in New York City and is building an aerobatic experimental of his own, which should be finished "sometime late Wednesday afternoon" — he's not quite as specific about the date.

Spirit Youth Aviation Day – Sat 4/20/02

by Phil Kitchen

Greetings to all from your local 'Young Eagles' staff. It's time again to start introducing young people to our world of flight. The first Young Eagle rally this year will be on Saturday April 20th and will be held at Executive Beechcraft. As you know, we are the major draw for Spirit of St. Louis Airport's 'Youth Aviation Day'. We expect up to 400 children to show for this exceptional event. Ask anyone who attended last year and you'll find out that a tremendous time was had by all!

The response so far has been fantastic! Groups such as the Missouri Pilot's Association, Gateway Eagles, our friends from Bethaldo EAA Chapter 864, and the Lindbergh High School Marching Band have already thrown their hats into the ring. Eric Lindbergh will be a part of the festivities. Eric will depart Spirit at around 11am for the east coast, retracing his grandfather's trip to Paris. The Discovery Channel folks will be there getting a piece ready on Eric's adventure that will air on May 20th. There will be static displays and food! In all, it will be quite an interesting day!

For the folks new to the chapter or just new to the Young Eagle program, I would like to extend a personal invitation to come out and be a part of this great activity. The Young Eagle program has challenged us to fly 1 million kids by the year 2003. Help us achieve this goal! You don't need to be a pilot. You don't need to own an airplane. All you need is a desire to be a part of a team that gives a child their first airplane ride! It's really a great feeling!

Pilots please remember; you need to be a current EAA national member and have proof of insurance. I know it's a hassle but I think we can all appreciate the situation. Also, the pilot briefing will start promptly at 8 am. It's mandatory that all pilots make this briefing. Important information will be put out that affects the safety and well-being of the rally. *Bring your tow bars!* The fuel situation will be as it was last year but we will need to know in advance who will be attending. Come in with full tanks, leave with full tanks! We need to have all of our pilots signed up at least a week in advance.

If you have a special situation where you need to bring the plane over the night before, talk to Al Donaldson about it.

If you would care to be a part of this event, pick your area of expertise and call one the following folks to volunteer:

Young Eagle Registration - Ted Boerding 636-949-0993

Ramp Control - Chuck Koviak 636-463-1327

Pilots – Al Donaldson 636-397-2410

Crew Chiefs (We need crew chiefs!)- Vince Morris 636-240-8417

Static Aircraft Display – Bob Crandell 636-696-0994

The clock is running, 2003 will be here shortly. Aviation will be 100 years in the making. Let's do our part and make sure that Chapter 32 is known for its Young Eagle Program. Hope to see you there! Fly Safely and God Bless.

Phil Kitchen

Knucklehead Knowledge

Larry

CLARIFICATION: For those of you who attended the last EAA Chapter 32 meeting at Old Country Buffet you heard that handsome guest speaker talk about tailwheel airplanes. He mentioned that now a days the FAA (Friendly Aviation Advisor) requires those wanting to receive flight instruction in a tailwheel aircraft need to enlist the services of a "authorized" flight instructor. Several years ago the FAA realized that the mature, mutli-houred, real airplane flying, tailwheel pilot, was becoming a rare thing. Rarer yet was the flight instructor who had this experience. So to close a few little loop holes in the aviation net the FAA came out with the term "authorized" flight instructor. A Certified Flight Instructor is now "authorized" to:

- ...give training and a sign off for operating a complex aircraft.
- ...give training and a sign off for operating high-performance airplanes.
- ...give training and a sign off for operating pressurized aircraft capable of operating at high altitudes.
- ...give training required for tailwheel airplanes.

IF,

The Certified Flight Instructor has experience in these areas before the established date as stated in the apropriate section of FAR 61.31. It makes sense that have a "experienced" flight instructor next to you to remind you to put the landing gear down in case you should forget. Remember, there are those who have landed gear up and there are those who are going to do it. Previously, a Flight Instructor could ride with an appropriately rated pilot and give him a Biannual Flight Review and not be rated or have time in the airplane. Now the FAA has place some requirements on the Flight Instructor to make sure he/she has experience and thus "authorized" to be there.

Along with the "authorization" in flying tailwheel airplanes comes the reality of having experience in that type of plane. Here is where the insurance companies step in and say we must have a certain amount of hours in the type of tailwheel airplane for insurance purposes. Occasionally the minimum time is five hours in type of aircraft. In most cases they want 10 hours. The more advanced your certificate, Private, Commercial, ATP (Airline Transport Rating) the lower the insurance rates. EAA has two great programs in place that will also help you with the insurance. Technical Counselors and Flight Advisors can help you get reduced rates on your homebuilt project. The Flight Advisor program can get you coverage on the first flight.

I hope this clears up any confusion that may have been created during the presentation. A Certified Flight Instructor with a tailwheel sign off is now "authorized" to flight instruct in a single engine tailwheel aircraft. All that may be lacking is the minimum time in that type of airplane to be covered by the all important insurance policy. Remember that a tailwheel airplane is not done flying until it is tied down at the ramp.

Until next time, "Keep thy airspeed up, less the earth come from below and smite thee"William Kershner

Safety Thru Education

mr. bill

Once in a while you come upon a story that makes you say, "What was that person thinking?" O.K. What we really say is "Oh they were not thinking at all!" We have all heard stories of those little airplane pilots running out of fuel. This month I ran across two that just left me shaking my head.

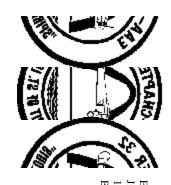
The First Situation- A Cessna Citation II/SP (Single Pilot) took off on a 100 mile trip and believe it or not.. After notifying ATC (Air Traffic Control) of low fuel, the pilot requested a diversion to Kingman, Arizona but before he could reach his new destination both engines flamed out. The aircraft landed gear up (remember what Larry said: Those who have and those who will!) on I-40 about half a mile short of the runway. The aircraft was on a flight without passengers from Chandler, Arizona, southeast of Phoenix, to Bullhead International, roughly 100nm northwest. The Citation was owned by Okay Doke Aviation. Needless to say not everything was not Okay Doke on that flight! According to my Phoenix expert, this old boy was about 20 degrees right of course on this trip and darn lucky that the trucks on I-40 did not run him over.

The Second Situation-This sad one was in a King Air B90 twin engine turboprop. "A total loss of engine power due to fuel EXHAUSTION!!!" On a flight from Pontiac, Michigan to Boca Raton, Florida. The flight was a Lifeguard flight with seven people on board and full fuel tanks. (The Lifeguard designation is given to the flight if it has a medical patient on board or body parts for a transplant operation. These flights once airborne are given a heading direct to destination. No delays.) The aircraft at takeoff was 720 pounds over maximum takeoff weight. According to the NTSB final report: "the aircraft struck a building and power lines before coming to rest in a cluster of trees about a half mile short of runway 13. Using the airplane fight manual, investigators calculated the fuel flow at 15,000 feet to be 524 pph (Pounds per Hour). Using ATC transcripts to calculate the actual time to climb (34 minutes instead of 24 minutes predicted for a maximum takeoff weight climb) and figured the King Air burned an extra 73 pounds of fuel (11 gallons) in the climb. Regardless, the flight manual showed the flight required four pounds (almost 1 gallon) more fuel than the aircraft had capacity for!!!"

No one survived this Lifeguard flight.

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While you're there, take time to join the Yahoo Groups to help you stay abreast of WWW.EAA32.ORG Laura Million, Web Designer Chapter happenings!