
EAA CHAPTER 32 NEWS

Jim Bower, Editor

January, 2002

HAPPY NEW YEAR!

And welcome back to the wonderful world of Chapter 32 activities. Here's hoping everybody made it through the holidays without undue spending or weight gain. Our January meeting features a program by aircraft engineer and former chapter VP Lee Lawson. Lee has given us some very learned discussions in the past and this will be no different. In addition, Doug Killebrew will present a program on our hangar progress to date.

NOTE THE MEETING DATE AND LOCATION CHANGES:

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 SATURDAYS** of January, February, and March. I say again, **THE LAST SATURDAYS - NOT the 4th Saturdays!** 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!

INFORMATION HOTLINE

286-9932

**CALL THIS NUMBER FOR INFORMATION ABOUT
UPCOMING EVENTS**

Knucklehead Knowledge

With the SPORTS PILOT CERTIFICATE looming on the horizon I Larry, will try to cram some knowledge into you knuckleheads. Please remember that Larry was not the sharpest tool in the shed. Larry is hoping to explain things in his simple lame brain way. It is hoped that you fine gentlemen and ladies would be able to pass the Recreational Pilots Written Exam after understanding these fine examples of learning.

To describe an airplane in words we must be able to identify the motions of the fixed-wing aircraft. There are three axes which are all perpendicular to each other.

LONGITUDINAL AXIS- also called the **ROLL AXIS** extends lengthwise through the fuselage. The **AILERONS** cause rotation about the longitudinal axis.

LATERAL AXIS- extends across the aircraft from wing tip to wing tip. This axis deals with **PITCH** and the airplane's **ELEVATOR** controls rotation around this axis.

VERTICAL AXIS- extends vertically through the center of gravity. Movement of the **RUDDER** causes rotation around this axis.

Q. The three axes of an aircraft intersect at the...**CENTER OF GRAVITY**

Many of this chapter members have heard it stated that \$Money\$ makes an airplane fly. Not true. It is the relationship between pressure and velocity in the air flowing over the wing. Bernoulli's Principle tells us that as air flows over an airfoil, the pressure will decrease as the velocity increases. Also the pressure will increase as the velocity decreases. Most wings have some type of curved or camber shape on the top half of the wing. When the air flowing over the top of the wing speeds up, its pressure drops and air above the wing is pulled down to fill this low pressure. Since for every action there is an equal and opposite reaction, the force with which the wing pulls the air down is exactly balanced by a force which pulls the wing up. The same force that pushes the air away pushes the wing up. The result of the air being pulled down to the top of the wing and pushed away from the bottom of the wing causes the air flowing over the wing to be forced down at an angle called the **DOWNWASH** angle. The weight of the air forced down is exactly the same as the lift causing the airplane to be forced up. This is determined by five factors:

- the cross-sectional shape of the airfoil (big or small camber or equal (Symmetrical-same on top as the bottom)
- the surface area of the airfoil (how long & wide the wings are)
- the angle the air strikes the airfoil (called the angle of attack)
- the speed of the air moving over the airfoil (more speed more lift)
- the density of the air (warm air is less dense- it has less molecules than in a standard (59 degrees F) unit of air. Cold air is more dense because of more molecules per standard unit of air.

Airfoil terms you need to know:

CHORD LINE- A line that passes through an airfoil from the leading edge to the trailing edge.

CENTER OF PRESSURE- the point on the chord line of an airfoil at which all the **AERODYNAMIC FORCES** are thought to be concentrated.

RELATIVE WIND- the direction which the wind is moving when it reaches the airfoil.

ANGLE OF ATTACK- the angle between the chord line of an airfoil and the relative wind. The angle of attack varies in flight.

ANGLE OF INCIDENCE- the angle between the chord line of an airfoil and the longitudinal axis of the aircraft. This is set at the factory.

UPPER CAMBER- the contour of the top surface of an airfoil.

LOWER CAMBER- the contour of the bottom surface of an airfoil.

MEAN CAMBER- a line from the leading edge to the trailing edge that is equidistant at all points from the upper and lower camber.

Q? The angle between the chord line of the wing and the longitudinal axis of the aircraft is known as... **ANGLE OF INCIDENCE**.

Q? The angle between the chord line of an airfoil and the relative wind is known as the angle of...**ATTACK**

Q? A line drawn from the leading edge to the trailing edge of an airfoil and equidistant at all points is called the ...**MEAN CAMBER LINE**.

Well I am sure the noodle is hurting so we will stop here until next month. There are 60 questions on the **RECREATIONAL PILOT EXAM** and it is my hope to review the areas cover by this exam. Soitenly.

Ultralight for Sale

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



Treasurer's Report

Hey gang, as they say, keep those cards and letters coming. The dues are dribbling in and I hope you guys and gals will pick up the pace. All dues have to be paid by the end of January or you won't make it in the roster. We have been getting some real nice Hangar Donations and pledge money. Our gratitude is extended to you all for your participation. You will be proud when we are in the new Aviation Resource Center and you can say "I helped pay for this". Also all you people who have been diligently working out there... tirelessly using up your weekends... should feel proud.

I look forward to a great start with Stan and Gary. The Treasury currently has \$4506.43 in the Hangar fund and \$6644.26 in the checking account. This totals \$11,150.69. We still have approximately 40% of the dues to collect yet.

Come on folks lets get excited and finish this building.

***Your Treasurer
Gale Derosier***

Dues are Due!

As you know by now, January 31 is the due date for 2002 dues. Please pay by then so your name will appear in this year's roster. I know you all want your correct information in the roster, too. So PLEASE take some time and check last year's roster and send any updated information to Jim Bower (10350 Toelle Ln. St. Louis, MO 63137 - jimbower@hotmail.com).

Also, Web Designer extraordinaire Laura Million would appreciate it if you would check the information that appears in the Members Only section of our chapter's website. For the password, call Laura at 618-288-7099. Pay particular attention to your e-mail addresses. You guys all change internet providers like crazy, and we have a hard time keeping up if you don't meet us halfway! If you see a discrepancy on the website, please e-mail it to Laura.

Way to go, Bill!

In the unlikely event that anybody missed it, I'd like to take this opportunity to highlight the fact that our very own Bill Blake got a mention in the latest issue of Sport Aviation. Look on page 31. There you will find an illustration by **NOTED** aviation artist/illustrator Bill Blake. Seems that Bill designed the little pixie that graces the Pober Pixie aircraft.

2002 Membership Renewal Form

As you know, the deadline for membership renewals is at the END of January, 2002. Please fill out this form and submit it to the Treasurer ASAP.

(Gale Derosier...28 Woodmere Point Court...St. Charles, MO 63303)

Instructions: This form will hopefully make life easier on you, the treasurer, and the guy maintaining the club roster (that would be me). When you send in your dues, just fill in your name **and only whatever information that changed since last year's roster.** (Pay particular attention to your e-mail address if it has changed recently!) In case you forgot, a year's dues is \$24.00, payable to EAA Chapter 32.

Name _____

Address _____

City _____

State _____ Zip _____

Spouse's Name _____

Area Code _____ Home Phone _____

Area Code _____ Work Phone _____

E-Mail Address _____

Licenses and Ratings _____

EAA Membership Number _____

Other Aviation Affiliations _____

Your Flying Planes _____

Your Plane(s) Under Construction _____

Projects/Interests _____

Tools _____

Skills _____

Committee/Office _____

Where do we go From Here?

from Flight Leader News, submitted by Al Donaldson

That's a good question in light of all that has happened since we last published Flight Leader News. So much has changed in the world since September 11 and the impact of those events has affected the Young Eagles Program. In the short term, the temporary flight restrictions stopped all Young Eagle flights in the United States. As the restrictions were eased many of you returned to the sky and flew Young Eagles. A more lasting impact is an increased reluctance of parents and children to fly. The number of calls and requests for information has dropped dramatically in the past two months.

The topic has been debated within the walls of EAA Headquarters and through numerous phone calls and E-mails from our pilots. The strong feeling from you is that we will not let what has happened dampen the enthusiasm for the Young Eagles Program. The events of September 11 should not be an excuse for failure. Rather, it is a wake up call a call to action for each and every EAA member pilot who can fly Young Eagles to do just that. Enjoy and share the freedom of flight.

So where do we go from here? It's simple. We continue to fly Young Eagles. We continue to educate the general public about general aviation and the benefits it provides. We deal with fears through patient explanations and calm emotions. We continue to conduct Young Eagle flights as professionals as we have done since 1992.

Over the next two years we have a great opportunity to show the world that general aviation is alive and well as it reaches its 100th birthday. Our goal during each of the next two years will be to fly 120,000 Young Eagles. It may seem like a tall order, but we have built a strong network of pilots, ground volunteers and Chapters to handle the job. To help our mission, I challenge each of you to find another EAA member pilot who has not flown a Young Eagle and encourage them to participate. Think of the pride we will have in 2003 when we meet our goal. Each of us will be able to feel a part of that accomplishment. There's certainly room for more pilots to share in that feeling.

We are turning toward the final approach for the Young Eagles Program. Let's set the trim, adjust the power and get ready for a beautiful landing. Together we will reach our goal. Together we will stand against those who would attempt to keep us from flying and those who wish to see our way of life disappear.

See you at the airport,

Steve Buss, Executive Director

Now that I'm "older" (but refuse to grow up), here's what I've discovered:

- 1) I started out with nothing, and I still have most of it.**
- 2) My wild oats have turned into prunes and All Bran.**
- 3) I finally got my head together; now my body is falling apart.**
- 4) Funny, I don't remember being absent minded...**
- 5) Funny, I don't remember being absent minded...**
- 6) What were we talking about?**
- 7) It's easier to get older than it is to get wiser.**
- 8) Some days you're the dog; some days you're the hydrant.**
- 9) I wish the buck stopped here; I sure could use a few.**
- 10) Kids in the back seat cause accidents.**
- 11) Accidents in the back seat cause kids.**
- 12) It's hard to make a comeback when you haven't been anywhere.**
- 13) The only time the world beats a path to your door is when you're in the bathroom.**
- 14) If God wanted me to touch my toes, he would have put them on my knees.**
- 15) When I'm finally holding all the cards, why does everyone else decide to play chess?**
- 16) It's not hard to meet expenses... they're everywhere!**
- 17) The only difference between a rut and a grave is the depth.**
- 18) These days, I spend a lot of time thinking about the hereafter... I go somewhere to get something and then wonder what I'm here after.**
- 19) If all is not lost, then where is it?**
- 20) Did I publish this already?**

Safety Thru Education

mr. bill

Several years ago while flying cross-country with a student in his recently purchased Cessna 172 I turned the fuel selector to OFF. Less than ten seconds later- SILENCE. The student looked at me and said, "FIX THAT, BILL." My reply was a cruel one, hey "I am NOT HERE - YOU THE MAN". I know this is not politically correct but .. I then marveled at this new aircraft owner as he started to "conduct the Symphony Orchestra." His right hand was flying and moving all over the various knobs and switches in the cockpit but he never really accomplished anything to help "our" situation. In a single engine airplane the EMERGENCY situation is fairly simple. First,

FLY THE AIRPLANE!!! ESTABLISH BEST GLIDE SPEED.

This is really most important. If above best glide speed, hold your altitude until you slow to that speed then trim the airplane. A Best Glide speed is usually stated in the manual. Vy speed is called Best Rate for climb. This speed can also be used if no best glide speed is given because it is the best lift over drag speed. With the airplane trimmed for best glide speed,

PICK A PLACE TO LAND AND POINT THE PLANE THERE

One must move aggressively to get to the intended area of landing. Most pilots casually get to glide speed then do not trim the airplane for that speed. We also must know how high above the ground we are. At 1,000 feet above ground level (AGL) we are basically on downwind for a field on the airplane's immediate left or right that is into the wind. Landing near a farm house or golf course or airport gives you the chance of someone seeing you flying low (with the engine sputtering, puffing out black smoke, heading straight down, etc..ah those eye witnesses) and calling 911 and getting you help. Speaking of 911 those cellular phones are great for calling for help when you did not land close to the above mentioned places and no one saw you. OK. We are FLYING THE AIRPLANE, IT IS TRIMMED AND WE ARE HEADED FOR OUR LANDING SPOT. NOW LET'S RUN THE EMERGENCY CHECKLIST:

FUEL SELECTOR- To the fullest tank.

MIXTURE- Full Rich

CARBURETOR HEAT- On or Hot

THROTTLE- Full

IGNITION- Left Magneto then Right Magneto, Both

PRIMER- Closed

In ten seconds we can run this checklist. I prefer to start from the bottom of the floor and work my way up. FUEL SELECTOR gets switched to the tank with the most fuel or to another tank. (Was that tank empty or did it have water? Was the vent clogged?) Then the MIXTURE goes full rich. (Was it too lean of a mixture?) CARBURETOR HEAT is pulled to the HOT or ON position. THROTTLE pushed to full power. IGNITION SWITCH should be turned slowly from BOTH to the LEFT MAGNETO then to the RIGHT MAGNETO. Then back to BOTH. (Was there any difference? Did it run on one magneto?) PRIMER KNOB should be locked in. (If it is out it will enrich the fuel mixture.)

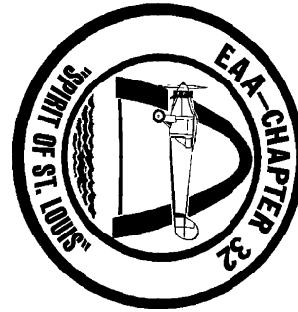
This basically covers all things in the fuel, air, and fire category that you can deal with now. NOW FLY THE AIRPLANE TO THE LANDING. If you're going to land short then land short. Trying to adjust the glide here will get you into the stall then spin accident category. If you're going to hit a pole or tree step on the rudder and have that fixture take off a wing on the right side for you Cessna drivers and the left wing for you Piper Cherokee drivers. When the dust settles you can open your door and walk for help. Glad you landed close to the farm house now aren't ya'. If you're from Wisconsin and coming back from Da' Packers game you can put your wedge of cheese on Da' head and prevent damaging your noodle. You laugh. It happened. Now you really will laugh. This past year in Johnstown, PA a young lad experienced an engine failure in his Cessna 152. The airplane headed for the trees below when at the last second he unbuckled his seatbelt and shoulder harness. The Cessna hit the trees and the young lad fell out of the plane down to the ground.

The evergreen branches he hit slowed and cushioned his fall to the ground. He told the FAA that he opened his seatbelt because "He just wanted to get out of that situation before hitting the trees." I can only guess that if that Cessna 152 had a cockpit voice recorder we would have heard this pilot yelling, "Scotty, beam me up."

REMEMBER: FLY*GLIDE*FIX*FINESSE IT TO THE LANDING SPOT

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Check out our fantastic Web Pages at

WWW.EAA32.ORG

Laura Million, Web Designer

While you're there, take time to join the
 Yahoo Groups to help you stay abreast of
 Chapter happenings!

TO: