

# THE NEW PROPWASH



Volume 3, Issue 8  
September, 2007

## UPCOMING EVENTS

### Chapter Meeting

September 27th

7:30 PM

Sugar Grove Firehouse

Business Meeting

Followed by

Program :

Fiona McCoy will share her experiences at the EAA Academy this past July. Fiona was the recipient of a Chapter scholarship.

&

Christine Ashley will tell us about her experiences at the Women Soar program at AirVenture this past July.

### Young Eagles Rally

Sunday, September 23rd

Pilot's briefing at 8:30 AM

Young Eagle Flights from  
9:00 AM—2:30 PM

Volunteers of all kinds are  
always needed!

Cook-out following the completion of the rally. Hamburgers and brats furnished by the Chapter. Bring a dish to share.

Last Young Eagles Rally of  
the year 2007

Sunday, October 28th

### AOPA Safety Seminar

"Regulations:What Every  
Pilot Should Know"

Tuesday, October 16th

The Hilton Garden Inn

St. Charles

### EAA Builders Workshop

Lewis University—Romeoville

October 20th -21st

See the President's article on page 2 of this newsletter for more details on both of these events.

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### Chapter Leaders

President Dick Low	630-717-6225	DickLCFI@sbcglobal.net
V-P Frank Consentino	630-844-2512	kw0727@comcast.net
Treasurer Larry Shaw	630-466-5555	DatecAviation@cs.com
Secretary Bill Schertz	630-879-5465	wshertz@comcast.net
Young Eagles Lesa Madru	630-717-6225	Flyinglows2@sbcglobal.net
Newsletter Editors:		
Bill & Marcia Cameron	847-742-2963	mec515@sbcglobal.net

**Quote of the Month**  
There is no other airport in the world which serves so many people and so many airplanes. This is an extraordinary airport... it could be classed as one of the wonders of the modern world.

**President John F. Kennedy, dedicating Chicago's O'Hare Airport, March 23, 1963**

## NEWS FROM THE PREZ, DICK LOW

Weather definitely had an effect on Chapter and area aviation activities last month. Only 10 people attended the Chapter meeting on the 23<sup>rd</sup>, primarily, I think, because of the severe weather that hit the Chicago area that afternoon and evening. The program was a short presentation on the new FAA Wings program as a lead in to the Wings Weekend North at DeKalb on the 24<sup>th</sup> and 25<sup>th</sup>. Unfortunately, the weather had an adverse impact on this event also. I volunteered as an instructor on Friday and didn't make a single flight, as the weather was IFR until late morning with the forecast for severe thunderstorms in the afternoon. However, I was able to sit in on six outstanding seminars as a result. Lesa accompanied me out to DeKalb and we also saw Chapter treasurer Larry Shaw and chapter member Kermit Kirby in attendance at some of the seminars.



Fortunately, the weather improved dramatically by Sunday and we had perfect conditions for the Young Eagles rally on the 26<sup>th</sup>. Approximately 20 kids were waiting for rides by the time we were ready to start flying at 9 AM and at the end of the day the count of kids flown stood at 157. Although we had ten pilots and airplanes available to fly kids at times during the morning, half of them had to leave by 1 PM due to mechanical problems and prior commitments, leaving five of us to finish out the day. By that time a considerable backlog of kids registered for rides had built up. Registrations were closed at 2 PM but the last Young Eagle flight wasn't completed until 4 PM. According to our registration staff, only two or three kids who had registered left without receiving a flight even though everybody was being told that the wait could be as long as 2 hours. Personally, I felt like we flew 300 kids as I flew non-stop from 10 AM until 4 PM. Our next Young Eagles rally is this month on the 23<sup>rd</sup>. Hopefully, the weather will cooperate again and we will have another outstanding day. As an added inducement for the volunteers, we are planning on having a cookout following the completion of the flying activities with hamburgers and brats furnished by the Chapter.

The program planned for this month's Chapter meeting will be short presentations by Fiona McCoy, who attended the EAA Academy as the recipient of one of the Chapter's scholarships, and Christin Ashley, who attended the Woman Soar program at AirVenture at my suggestion. I would also like to encourage everybody to bring their pictures of AirVenture to the meeting to share with the rest of us. The firehouse has equipment to show digital or video tape media on a screen using an overhead projector so, if your pictures are on a CD, we have the perfect setup to view them.

Under the heading of other events, the AOPA is holding a safety seminar entitled "Regulations: What every pilot should know" on Tuesday, October 16<sup>th</sup>, at the Hilton Garden Inn in St. Charles across North Ave. from the Pheasant Run Resort. The Hilton Garden Inn is also within walking distance of the North Ave. ramp at the DuPage Airport for anyone inclined to fly in. The AOPA seminars are always outstanding with some really nice door prizes. This event does not require on-line reservations and has no attendance limit but similar seminars in the past in this area have been standing room only. For anybody interested in building their own airplane, the EAA Aircraft Builders Workshops are coming to Lewis University in Romeoville on October 20<sup>th</sup> and 21<sup>st</sup>. Classes are offered in Introduction to Aircraft Building, Composite and Sheet Metal Construction as well as a presentation on Saturday evening on What's Involved in Kit Building for a nominal \$25 charge which includes a Pizza Dinner.

Also I am tentatively planning on holding a Private Pilot ground school for the Chapter starting in January if there is enough interest. I will need a commitment from at least 15 people in order to go forward. Participants must be EAA and Chapter members and the cost will be approximately \$170 for materials. If you know of anybody who is interested, please have them contact me at DickLCFII@sbcglobal.net.

See you at the Firehouse on the 27<sup>th</sup>.

Dick Low President, EAA Chapter 579

## Status of the Custom Aerobatic Monoplane being built by Todd Ashcraft.

First, here's an overview of the plane:

400hp, monoplane, tube and fabric fuselage truss with aluminum and composite shells from the seats forward, 2 seat tandem, aux "belly tank" likely for long cross countries, wood and composite symmetrical airfoil, tapered chord wing, 3 blade prop, wire braced tail, taildragger with spring main gear and "stinger" style solid tailwheel.

From a distance, this would look like a homemade Yak-54. Inside, everything is from a blank sheet of paper.

Performance goals/estimates: 400hp Power, 400 deg/sec roll rate, +/-10G (2 person) with minimum 50% safety factor, power off stall speed 65mph, Vmax (straight & level) 240 mph, T/W ratio of 1.0 min, at akro weight of 1600 lb.

I've named it Peaches.

Firewall forward: 400hp Vendenyev M-14P engine has arrived, and is beautiful and oily. Engine not installed, waiting for design of engine mount, and stability/control analysis. Slowly gathering parts and knowledge on this engine. Likely trading in the huge magnetos for auto coil version at OSH '07. Trading in huge alternator for small B&C version to save weight. Likely buying prop at OSH '07. Likely buying YAK cowl as male mold of custom cowl at OSH '07.

Wing: Wing spar materials are on-hand, and design of wing spar continues to be a pain. Wing aerodynamics/planform/prelim layout complete. Waiting on spar design to be finalized. Likely to perform load tests to failure on sample spar prior to finalizing spar design.

Fuselage: Fuselage truss is still welded at all basic joints, with the rest tack-welded. Truss is still on landing gear. Canopy bubble is still in crate. Tail feathers tubing is on-hand and waiting for the layout to be completed. All tail fittings/hinges/etc completed. Panels, formers, skins, etc waiting on wing to be completed and installed.

One problem I would like the Chapter's help with is the paint scheme and colors. If we have anyone who is interested in helping develop this, they can see me at Hangar 75 or at Camp Scholler.

Regards, Todd Ashcraft

## Learning How to Fly a Gyrocopter or Gyroplane

By Albert Dyer

This past month I went to Lansing Airport to visit the local Gyroplane group. Yes, they refer to their machines as gyroplanes instead of gyrocopters. There are many different styles of gyros there. The club has two gyros that are used for training. Check rides with an FAA examiner are also available should you want a type rating. There are two hangers full of gyros either flying or being built. My understanding is that everyone pays a \$40/mth fee for hanger space. Lansing Airport is an uncontrolled airport. Most of the gyro's have a hand held radio to listen for traffic while flying. They fly west of the runway over open land. The airport manager and the club have had a good working relationship for many years.

I thought they would be very loud, however, the different types that flew that day were pretty quiet. All of the gyros I saw had a pre-rotor. This device spins the free-spinning rotor blades to about 200 rpm. In flight these blades rotate on average of 325 rpm. With the pre-rotor spinning the blades, the take-off roll is very short, less than 200 ft. What really surprised me was the landing distance. These machines can be landed and rolled to a stop in less than 25 ft! The engines currently being used on average burn about 4 gph.

Mechanically, it's straightforward. The keel is either straight or stepped. The stepped keel lowers the CG a few inches and gives a little better stability in flight. Some machines had disk brakes while others had drum. The truly basic machines just use a plate which is pressed onto the nose wheel to bring the machine to a stop. All had basic flight instruments and a few had an additional rotor tach. Fuel tanks ranged from a seat type tank to single or dual tanks mounted on the sides. All in all, these machines have little regulation as to how to build them and what features they should have to ensure safe flight.

Flying is pretty much the same for each type of gyro if the machine is balanced correctly. One question I had was the amount of down-wash experienced by the pilot. In level flight these machines can fly up to 70 mph and as slow as a few mph heading into a wind. None, was the answer to my question. Air is actually sucked upward through the rotor blades to provide lift instead of producing downwash as in a helicopter. All this sounds pretty good to me! Quiet in flight, simple in construction, short takeoff roll and a shorter landing rollout. Easy on fuel with a 70 mph cruise. There has to be a downside somewhere...and there is.

Pushover. The maneuver is called pushover. Should this happen to you there is no recovery...you're dead. It is termed "unloading" the rotor blades. Simply stated, if you put the machine in a hard climb and don't reduce power at the top of the climb as you approach stall speed, then push the stick forward to pitch the machine down, the rotor blades flex inverted and the machine will tumble out of the sky. This is what killed so many people who didn't understand what the rotor blades were doing. As long as you reduce your power before the stall, the machine will mush forward in a nose high attitude, keeping the rotor blades loaded. In a few seconds the nose will naturally lower and you will remain flying. That's it. One maneuver to be careful with.

I am going to pursue an intro flight and then determine if I want to work toward this type rating. The rating is not required, nor is a medical. It can all be accomplished under the sport pilot criteria. For me, I would feel safer in a gyroplane instead of a powered parachute of some sort.



# BEAT BILLY

**Question for August:**

When is a DC-6, big engine, lots of seats, not a DC-6?

**Answer for August:**

A DC-6, big airplane, four engines, lots of seats, made by Douglas is not a DC-6, when it is a DC-6, small airplane, one engine, four seats, made by Cessna Aircraft Company in 1929. Twenty-four examples of the DC-6A were made by Cessna. Four of the DC-6A's were procured by the Army as the UC-77 in 1942. Twenty-five DC-6Bs were also made.



**A visual question for September:**

What is this part? What is the type of plane this part is on?

**Note From Your Newsletter Editors**

Thanks to all those members who have been contributing articles or photos for the newsletter for our members to read and enjoy. We have run out of articles for next month, so get busy and write up your latest aviation adventure. We really appreciate it if you type your article as a word document and then attach it to your e-mail. If you type it in the body of your e-mail, it is difficult to format or make changes. Send articles to: [mec515@sbcglobal.net](mailto:mec515@sbcglobal.net). In October we are back to our regular monthly deadline of the 15th.

**Fox Valley Sport Aviation Association—EAA Chapter 579**

**Membership Application or Renewal**

Name \_\_\_\_\_ Date \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_ EAA # \_\_\_\_\_

\_\_\_\_\_ New \_\_\_\_\_ Renewal Spouse's Name \_\_\_\_\_

**Annual Membership \$20.00 -**

**Checks made payable to: EAA Chapter 579**

**Mail application & check to our treasurer:**

**Larry Shaw**

**147 N. Buckingham Drive**

**Sugar Grove, IL 60554**

**FOX VALLEY SPORT AVIATION  
EAA CHAPTER 579**

The New Propwash  
PO Box 559  
Sugar Grove, IL 60554

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Aircraft displays—Mighty 8th Air Force Museum, Savannah, Georgia

Photo by Bill Cameron