

# Experimental Aircraft Association



# TALESPINNERS

## Chapter 174

Cincinnati, OH  
Chartered since 1966  
[www.eaa174.org](http://www.eaa174.org)

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<< Next Mtg: Sun, July 16, 2:00 PM, Hawk Building >>

July, 2006

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## Flying Trivia

### One Second in the Life of a Racer

By Tom Fey, from a clipping from Stu Faber

The Unlimiteds go flashing through the race course, engines howling, air shearing, heat waves streaming. Four hundred eighty miles an hour is 8 miles a minute, and the elite racers take about 70 seconds to cover the 9.1-mile Reno course. If you could take a souped-up P-51 racer flying the circuit at Reno, slow time down, and examine one second, what would you find?

In that one second, the V-12 Rolls Royce Merlin engine would have gone through 60 revolutions, with each of the 48 valves slamming open and closed 30 times. The twenty-four sparkplugs have fired 720 times. Each piston has traveled a total of 60 feet in linear distance at an average speed of 41 mph, with the direction of movement reversing 180° after ever 6 inches. Three hundred and sixty power pulses have been transmitted to the crankshaft, making 360 sonic booms as the exhaust gas is expelled from the cylinder with a velocity exceeding the speed of sound.

The water pump impeller has spun 90 revolutions, sending 4 gallons of coolant surging through the engine and radiators. The oil pumps have forced 47 fluid ounces – roughly 1/3 gallon – of oil through the engine, oil cooler and oil tank, scavenging heat and lubricating the flailing machinery. The supercharger rotor has completed 348 revolutions, its rim spinning at Mach=1, forcing 4.2 pounds or 55 cu. ft. of ambient air into the combustion chambers under 3 atmospheres of boost pressure.

Around 9 fluid ounces of high octane aviation fuel, 7,843 BTU's worth of energy, has been injected into the carburetor, along with 5.3 fluid ounces of methanol/water anti-detonate injection fluid.

Perhaps 1/8 ounce of engine oil has been either combusted or blown overboard via the crankcase breather tube. Over 1.65 million foot-pounds of work has been done, the equivalent of lifting a station wagon to the top of the Statue of Liberty.

In that one second, the hard-running Merlin has turned the propeller through 25 complete revolutions, with each of the blade tips having arced through a distance of 884 feet, at a rotational velocity of 0.8 Mach. Fifteen fluid ounces of spray bar water has been atomized and spread across the face of the radiator to accelerate the transfer of waste heat from the cooling system to the atmosphere.

In that second, the aircraft has traveled 704 feet – close to 1/8 mile – or roughly 1.5% of a single lap. The pilot's heart has taken 1.5 beats, pumping 5.4 fluid ounces of blood through his body at a peak pressure of 4.7" of mercury over ambient pressure. Our pilot happened to inspire during our measured second, inhaling approximately 30 cu. in. (0.5 liters) of oxygen from the on-board system, and 2.4 million – yes, million – new blood cells gave been formed in the pilot's bone marrow.

In just one second, an amazing sequence of events has taken place beneath those polished cowlings

and visored helmet. It's the world's fastest motor sport. Don't blink!

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## YOUNG EAGLES RALLY SOARS DESPITE RAIN!

Despite a couple downpours, our annual Young Eagles rally managed to fly a respectable 87 new Young Eagles this year! The June 10<sup>th</sup> rally got off to a good start at about 8:30 AM, after Bob Porter and Don Fairbanks completed the pilot briefing. We managed to get about 20 kids in the air before the rains started; but, after about a 30 minute delay, we were back in the air again!

The Hawk Building really worked in our favor this year, since we were able to keep the kids and parents dry while waiting for their flights. And those who were willing to wait out the rains were all treated to an inspirational talk by Tuskegee Airmen David McPheeters and John Lehr. (You could have heard a pin drop as Mr. Lehr recounted his WW II experience in an air attack with the Germans, in which a fellow pilot was lost!)

We were also honored to have Tuskegee Airmen – Cincinnati Chapter treasurer Lorenzo Baldwin fly for us. Lorenzo flew 12 Young Eagles for us in his Cherokee 235.



### Young Eagles Captivated by John Lehr's Talk

Early on, Mike Wolf was forced to turn away from the airport on the return from his first run. So he just detoured down to Brown County, landed and spent about a half hour chatting with the kids all about flying. He radioed his situation to the Air Boss, and rumor has it that when the parents were told of the situation, they responded with "Great! We'll come back for them on Monday!"

## Young Eagles Tally for the 2006 Rally

Pilot	Aircraft	Young Eagles
Baldwin	Cherokee 235	12
Dalgewicz	Belanca	12
Taylor	Cardinal	12
Winemiller	Cherokee 235	12
Franzago	Bonanza	10
Collins	Cessna 170	9
Parobek	Cardinal	9
Wolf	Aztec	8
Ewers	Citabria	3
<b>Total</b>		<b>87</b>

The Chapter is grateful to all members who participated in the rally - pilots, ground crew and registration crew. Without your efforts, the rally would never have gotten off the ground!

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## FIRST WEDNESDAY WORKSHOPS TO RESUME

"First Wednesday" Workshops will resume on August 2<sup>nd</sup>. Upcoming topics include "Swaging" and "Working with Plexiglass".

Please check the website, [www.eaa174.org](http://www.eaa174.org) for last minute changes.

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## NEED TOOLS?

For new and experienced builders! Tom Rawls (a friend of chapter member Mike Franzago) has just about all the tools you need to build an RV-type homebuilt! We're talking LOTS of stuff. Tom has been involved in building aircraft for many years and has decided to put down the rivet gun.

For more information, send an email to Tom at [iflyups@goodnews.net](mailto:iflyups@goodnews.net), and ask for a list of available tools.

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## ROSTER CHANGES / ADDITIONS

Please make the following addition to your roster:

**George Shelton** – new member!  
8012 Colliver Drive, Maysville, KY 41056  
Home: 606-759-0575  
Work: 606-759-3618  
Cell: 606-407-0407  
Email: [grs@stober.com](mailto:grs@stober.com)

# Hangar Flying

with Stu Faber

July, 2006

[stuartlfaber@msn.com](mailto:stuartlfaber@msn.com)



**AVIATION HISTORY.** My interest in collecting the history of aviation in the tri-state has led in some unexpected directions. For several years a group of people with similar interests, which has selected the name Cincinnati Aviation Heritage Society (CHAS), has met monthly to collect information and investigate ways of preserving it as a part of local history. At the present time it is expected that a non-profit educational program will be created. The City has been approached on making available Hangar No. 3 which is the one closest to the Terminal building. It is being considered for being designated a historic structure for its art deco style. It is no longer used as a hangar. As this program would be of considerable value for educational purposes the Society has recently welcomed two members of the Tuskegee Airmen to our project. Although neither were military pilots, both served in the Air Force.

Meantime we continue to collect bits and pieces of historic information which I, as principal compiler, continue to record. I hope to soon have a draft document to pass around for comment and any additional information interested persons may have.

**RECENT NEW INFORMATION.** When reading a book about Pan American Airways it held a clipping from the Cincinnati Enquirer that in 1990, when Pan American went bankrupt, its assets were turned over to Delta. What goes around, comes around!

The book gave considerable detail on the career of a former gravel pit manager from Miamitown. After Lindberg's transatlantic flight, William Langhorne Bond, who had taken a few flying lessons, got a job with a relative named George Westervelt who was managing a Curtiss-Wright plant in Baltimore. The plant closed and Curtiss-Wright sent Westervelt to China to try to salvage China Federal Airways and shortly Bond was sent to help. Pan Am took over China Fed. Airways, and Bond became the one who held Pan Am's various China programs together until the Communists drove them out, after which he retired.

Another area name that played a very important part in aviation was that of the Rentschler family who operated a very important machining and tool mfg. business in Hamilton. Frederick B. Rentschler, in 1919 formed the Wright Aeronautical Corp. Using some engineers and including Charles L. Lawrence, formerly of Wright-Martin, they produced the air cooled radial engines the Navy wanted, such as the famous Whirlwind. He left Wright and formed Pratt & Whitney and the Wasp line of engines. He formed what later was known as United Airlines and went on to be involved with Hamilton Propellers, Sikorsky, and to produce thousands of engines used in WW II. At one time he was also involved in Pan Am. Although his name is not widely known, he had a major affect on the development of aviation.

**TRAFFIC CONGESTION** can be substantially improved around airports with a new navigation system pioneered by Alaska Airlines to reduce flight cancellations into bad approach airports. Using special onboard hardware and GPS satellite fixes, and probably coupled to the autopilot, instead of flying point to point as usually programmed, the course follows a more direct path which avoids all obstacles and holds approach much more accurately. It requires some training of crews and special programs for each airport. Safe landings and take offs can be at much tighter minimums than presently available. As flight paths are more precise spacing between planes can be closer. A number of busy or limited access airports have the system installed and planes configured to make use of the system. It seems to work well and may reduce the need for so tightly restricted areas. It is called RNP for Required Navigation Performance which doesn't explain much. FAA likes the system! *Wall St. Journal, 12 May 06.*

**AIR PARKS.** Is forming private airparks the answer to the shrinking number of smaller airports? Some seem to think it might be, but I expect in many cases it would be too costly for most pilots.

**HIGH ALTITUDE TRAIN.** China has released information on a recently completed train running from Beijing to Lhasa in Tibet. Much of the route is through high desert and includes 340 miles on ice and permafrost and long stretches at and above 13,000 feet. At one point it reaches 16,500 feet. The high altitude sections are assisted by engines made by GE and designed for the altitude (Turbo-electric?). The train was built by Bombardier Inc. and is pressurized and supplied with oxygen-enriched air. Various sleeping accommodations are provided for the 48 hour run. 100,000 workers built the railroad at a cost of \$4.2 billion. Would an Airbus A-380 airlift have cost less?

## Upcoming Events of Interest to Chapter Members

- **July 13-15, Thu-Sat. Helicopter Roundup.** Hillsboro, OH. For more information, call 937-364-2047.
- **July 14-16, Fri-Sun. Gathering of Eagles XI - Wings Over Berlin.** Warbirds fly-in. Featured aircraft: B-17, Avro Lancaster, Douglas C-54, as well as other smaller classic aircraft. Warbird plane rides. Willoughby, OH. For more information, call 440-943-0084.
- **July 15, Sat. Shelbyville Hangar Cookout.** This annual fly-in / drive-in event is put on just for the enjoyment of getting together for meeting old friends and making new friends, pilots and non-pilots. Food and soft drinks furnished. Live country music. Shelbyville Municipal Airport (KGEZ), Shelbyville, IN. Call 317-357-2479 for info.
- **174 July 16, Sun. Chapter Meeting.** Hawk Building, Clermont County Airport, 2:00 pm.
- **July 17, Mon. American Barnstormers Tour.** A nostalgic salute to the daring young men and women who ventured across America during the 1920's seeking fame and fortune in their biplanes. Twenty vintage aircraft from the 1920's and 1930's are barnstorming the Midwest. Smith Field Airport (KSMD), Fort Wayne, IN. See below also. For more information, call 863-286-4103.
- **July 18, Tue. American Barnstormers Tour.** Monroe County Airport (KBMG), Bloomington, IN. See above for details.
- **July 22, Sat. Miller Airport 60 Year Celebration.** Miller Airport is celebrating its 60th year (1946-2006) with a fly-in lunch. Menu consists of BBQ Pulled Pork Sandwiches, Hot Dogs, Baked Beans & Chips, Cookies & Soft Drinks. Static aircraft display and model airplane display. White Barn Creations Country Store at the Airport. Summer Tent Sale day of Fly-In. Miller Airport (C40), Bluffton, IN. For more information, call 260-674-6710 or 260-760-0828.
- **July 29-30, Sat-Sun. Dayton Air Show.** Dayton Cox Intl. Airport. Gate times 9:00 am – 6:00 pm.
- **Aug 12-13, Sat-Sun. Vintage Chapter 27 Fly-In.** Delaware Airport (KDLZ), Delaware, OH. Call 740-363-0767 for information.
- **Aug 18-20, Fri-Sun. 8th Annual Ohio Aeronca Aviators Fly-In.** Lots of flying, friendship and fun and a forum or two. On-airport camping and local lodging available. For additional information, call 216-337-5643 or email bwmatz11ac@yahoo.com. Alliance-Barber Airport (2D1), Alliance, OH.



### **Next Chapter Meeting**

**Sunday, July 16<sup>th</sup>, 2006, 2:00 PM**

***Hawk Building, Clermont County Airport***