

	<h1 style="text-align: center;">PROPWASH</h1> <p>PROPWASH is published for the dissemination of information for and about the members of Chapter 190 of the Experimental Aircraft Association (EAA). President Jeff Spencer, Vice President Charles P. Cozelos, Secretary Bryan Tauchen, Treasurer Jim Harchanko, WebMaster Jeff Spencer.</p>	
<p>EAA Chapter 190</p>	<p>http://eaa190.weebly.com/</p>	<p>November 2012</p>

Photo of the Month:



Construction of the “New” Huntsville Airport terminal as the airport was moved from Thornton Ave. to west of the Parkway on what is now Airport Road.

Presidents Message:

Jeff Spencer - EAA # 687437

Hello Fellow Members!

Hello fellow chapter members. November is the month of our bi-annual chapter officer and Board of Directors election. This month’s meeting will be on Tuesday, November 13th at

6:30 pm at the Moontown Airport. Please come and cast your ballot to elect our officers for the next two years. If you are interested in being considered for an officer position, please contact a member of the Nominating/Election committee (myself, Bryan Tauchen or Jamie Dodson). In addition to the elected officer positions, there are appointed positions that you should also consider. This includes Young Eagle Coordinator, Projects Committee Chair, Programs Committee Chair, Membership Coordinator, Newsletter and Web Master. Most of these are self-explanatory; however, if you have questions about their responsibilities, please contact me. If you can't make the chapter meeting on 11/13 you may cast your ballot by proxy by sending it to the Chairman of the Board of Directors, which is Jamie Dodson.

Regarding our monthly chapter breakfast, I talked to Jerry Barnett on Saturday 11/3 and he said he thought he was making progress with his insurance company and that he'd talk to them again this coming week. I will continue to keep the chapter informed and will continue to look to Jim Harchanko to work with the Buckhorn Band Parents to keep them informed.

Editors Note: As of 6 November we have heard that the Breakfast is on again.

Finally, as an early reminder, 2013 chapter membership dues will be due on January 1, 2013. Dues will again be \$15 this year, which is just enough to cover our annual EAA chapter membership with national and our insurance. Thanks!

Member Spotlight:

Minutes of Last Meeting:

Bryan Tauchen – EAA # 651954

EAA 190 Chapter Meeting – 10/16/2012

The meeting was called to order at 6:30 pm at the Moontown FBO. Fourteen members were present.

Minutes and treasurers report have been posted to the web site. No comments were received.

It was reported that a number of donations had been received in memory of George Myers. It was agreed that this should be for the benefit of the chapter youth programs.

Aaron Wypyszynski reported that 223 young eagles were flown at the September fly in. Aaron has gathered email addresses from 36 kids and plans to follow up with them. Aaron reported that now is the time to reserve a position for the Air Academy in Oshkosh. The cost for one student is approximately \$1500 including transportation. Some of this can be paid using Young Eagle credits. Materials have been ordered for the Eagle program. It is intended that the Eagle participants have a more intensive aviation experience than the typical Young Eagle experience.

Motion was made and seconded that chapter funds be used to reserve a position at the Air Academy. Motion passed.

Motion was made and seconded that the Air Academy scholarship be named after George Myers (George Myers Air Academy Scholarship). Motion passed.

Jerry Barnet announced that the third Saturday breakfast (October 19) has been canceled. He is negotiating the status of future events with his insurance company.

Wes Conkle reported that he is working on the golf cart. He has purchased a head gasket, battery and some other parts. Motion was made, seconded to reimburse Wes for the parts he has purchased. Motion passed.

The tower steps are on hold.

Jamie Dodson appointed Jeff Spencer to head the nominating committee.

Meeting was adjourned.

Treasurers Report:

Jim Harchanko – EAA # 541411

Date	Ck #	Description	Deposit	Check	Balance
10/01/12		Beginning Balance			\$24,125.51
09/21/12	1068	Renja Reing-Schmitt Family---Chris Schmitt Memorial (overlooked in last month's report)		\$200.00	\$23,925.51
10/17/12		YE memorial for George from Delores Moore	\$50.00		\$23,975.51
10/17/12		YE memorial for George from Bonnie Pearson	\$25.00		\$24,000.51
10/17/12		YE memorial for George from Anthony & Elizabeth Parks	\$50.00		\$24,050.51
10/17/12		YE memorial for George from Witchey's	\$50.00		\$24,100.51
10/17/12		YE memorial for George from Joyce Henry	\$50.00		\$24,150.51
10/27/12	1069	J. Harchanko---Stationary/stamps (acknowledgement of memorials)		\$16.93	\$24,133.58
10/31/12		Ending Balance			\$24,133.58

Safety:

Wes Conkle – EAA # 633811

Aviating carries a certain amount of risk. It's a fact of life, and it's probably part of the attraction to flying. Of course, when accidents occur, it takes the romance out of the risk. We should all be trying to minimize the risk we expose ourselves to while enjoying our hobby/line of work. There are two main ideas in this article: *flying is high energy*, and *airplanes aren't designed to crash!*

We have all probably heard someone share the line that 'it may be a slow plane, but that means it can just barely kill you'. Let's look into the concept; even the slowest plane we fly can expose you to energies far beyond the minimum necessary to cause injury or death. The average approach speed for the aircraft we fly is probably about 65 - 70 mph, and that is near the slowest regime of flight. If you are going to impact something while in controlled flight, you will be travelling at least this speed. Imagine a collision with a tree during your next trip on the freeway.

Another way that an aircraft can expose you to high energy levels is through gravitational potential energy. In short, the higher you are above the surface, the more energy you possess. If something interrupts the wing's ability to create lift, the aircraft will begin converting potential energy into kinetic energy (physics definition of falling). Then the situation is the same as the preceding paragraph, except at a likely much higher speed.

Another thing to consider is crashworthiness of our planes. We usually think mostly of their airworthiness, but compare an aircraft to a modern automobile during a collision. Due to pressure from litigation and government mandated crash performance standards, autos have been engineered to crash well. Antilock brake systems enable drivers to slow effectively in a panic stop. Airbags cushion the occupants from solid interior components, which have also evolved over time to be softer and more giving upon impact. The unit-body structure of the auto is designed to crumple strategically, which absorbs the kinetic energy of the impact while maintaining the shape and volume of the passenger compartment.

Contrast this with an airplane. It is designed to be as light as possible, in order to maximize useful load and efficiency. There is very little allowance for the weight of safety systems or energy absorbing masses of steel. In addition, it was likely designed long before automobiles began evolving sophisticated safety systems. The aircraft's frame is designed for structural strength, to keep the wings in the right position after being exposed to a large gee load while flying overgross. Airbags are rarely found in GA planes, and safety glass is too heavy.

Go back to the description of falling and think about a stall-spin accident. The nose is very far below the horizon, resulting in a frontal impact. Most of the engineering that GA planes hold for crashworthiness works under the assumption that the impact will be on the undercarriage (i.e.: hard landing) See *10CFR23.562* for more info. In the stall spin scenario, the impact is both high energy and frontal, what the NTSB calls an 'unsurvivable impact'. This is why CFIs teach us to fly stable base to final turns with the ball centered, and go around if it doesn't look right!

There are a couple of things that can be taken away from the preceding info. One, the old adage to 'fly the aircraft as far into the accident as possible' (which keeps the aircraft in a more survivable attitude). Two: The slower your aircraft can fly, the less energy needs to be dissipated in the collision.

For interesting reading, take a look at the NTSB report on airbags in GA:

<http://www.nts.gov/doclib/safetystudies/ss1101.pdf>

There is a lot more on this topic of course, but here is something to think about.

If you have questions or comments, please email me!

Young Eagles:

Aaron Wypyszynski – EAA # 579057

I am writing this article as I hurtle through the air at 490mph, 31,000 ft over southern Kansas in a plane that weighs over 300,000 lbs! Have you ever wondered just what keeps this plane up? Have you ever wondered what makes a plane fly, how is it built, or what it takes to fly? If you are interested in learning more about any these, please let me know and I will be happy to put together an EAA Chapter 190 Young Eagles event on the topic.

October was a bit of a slow month for Young Eagles after our busy month of September. I hope to make November a much more active month. We hope to have the pancake breakfast back in full swing at Moontown this month, with Young Eagle flights to follow. We can also use help with aircraft parking, so feel free to come early (we start at 7:45) and help us park planes. If there is no fly-in again this month, we will still be hosting Young Eagles flights the third Saturday of the month with registration starting at 8:30. If you are unable to make it by 9, or if the third Saturday of the month does not work but you are still interested in a Young Eagles flight, please email me at YoungEagles.EAA190@gmail.com.

This month I also hope to start a new Young Eagle Activities for those that have already had their first flight. The goal is to go fly to at least one other local EAA Chapter's Pancake Breakfast. I will try to make at least two seats available each time I go. If there are other pilots attending a pancake breakfast that would be interested in taking some of our Young Eagles, please let me know. For those Young Eagles that are interested in going on a breakfast flight, please let me know and I will add you to the email list. The Local chapters that we typically attend are: First Saturday – Winchester, TN; Second Saturday – Guntersville, AL; Third Saturday is the Moontown Breakfast, Fourth Saturday – Shelbyville, TN. I typically get to Moontown between 7:00- 7:30 with a 7:30-8:00 Departure. I typically spend 30-45 minutes at breakfast and looking at the other planes that fly in. I typically return to Moontown between 9:30 and 10:30. I look forward to some great Saturday Morning flights!

The second activity that is starting to take shape is our yearly sponsorship for one of the EAA 190 Young Eagles to go to Air Academy in Oshkosh, WI with the chapter covering all costs. More information may be found at www.youngeagles.org/programs/airacademy or feel free to contact me. This will be the third year that we have sponsored a Young Eagle to go to Air Academy (both have been sponsorships to the Advanced Camps). We select a Young Eagle based on their involvement in chapter and Moontown activities as well as their passion for aviation. If you or someone you know would be interested going, please let me know.

EAGLE FLIGHT ARTICLE

This is the first article for the new Eagle Flight Program. The Eagle Flight program is focused on introducing those ages 18+ to aviation and helping to mentor and support their love and pursuit of aviation. The Eagle Flight program officially kicked off at Oshkosh this year and has been slowly building, with approximately 250 flights so far. I recently received the registration, so we are ready to start Eagle Flights at Chapter 190. The pilot requirements are the same as those for Young Eagles flights (Current Medical, Current Flight Review, and Current aircraft). The registration forms are also very similar to the Young Eagles forms, with the exception of a parental guardian signature. Unlike the Young Eagle flights which are focused on rallies and introducing large numbers of kids to aviation, Eagle Flights are focused on one-on-one flights for individuals who already have a desire to fly. I will bring several forms to our next chapter meeting and will be happy to take some time to discuss the program with those interested. I am currently looking for pilots interested in flying Eagles. Please let me know if you would be interested.

Flight Advisors NotePad:

George Martin III – EAA #

3M5 NOTAMs:

Jerry Barnett – EAA # 1005123

Southland aerospace firms are building the next generation of blimps and other airships.

September 01, 2012

By W.J. Hennigan, Los Angeles Times

Not since the waning days of World War II have the mammoth wooden blimp hangars at the former military base in Tustin seen as much airship manufacturing work as they do today. Inside the 17-story structures that rise above southern Orange County, Worldwide Aeros Corp. is building a blimp-like airship designed for the military to carry tons of cargo to remote areas around the world. "Nobody has ever tried to do what we're doing here," Chief Executive Igor Pasternak said of the 265-foot skeleton being transformed into the cargo airship. "This will revolutionize airship technology."

Residents of Southern California are no strangers to airships. The Goodyear blimp, based next to the 405 Freeway in Carson, regularly lumbers its way across Southland skies and settles above the Rose Bowl and other locations for televised views from overhead. Goodyear imitators also dot the skies above other venues. But in recent years, the affordability of airships as well as developments in high-definition cameras, high-powered sensors and other unmanned technologies have turned these oddball aircraft from curiosities of a bygone era to must-have items for today's military. And airships increasingly are being used for civilian purposes.

The federal government is buying blimps, zeppelins and spy balloons, and many of these new-generation hybrid "lighter than air" aircraft are taking shape across California. "So much is going on with airships in California now," Pasternak said. "It wasn't this way 10 years ago." Pasternak's Montebello firm makes airships used for surveillance, advertising and transport. Lockheed Martin Corp. designs and builds airships for commercial use at its secretive Skunk Works facility in Palmdale. Northrop Grumman Corp. does design work for airships around the Southland but is building them in Florida.

Although these steerable aircraft are sometimes known casually as blimps, there are differences. A blimp is shaped by the gas inside of it, whereas a zeppelin has a rigid skeleton inside. The helium-filled sky balloons, or aerostats, used over Afghanistan are neither blimps nor zeppelins. But they all fall under the term "airship."

The importance of these next-generation airships became obvious to the Pentagon as increased use of drones highlighted the need for stationary aircraft that could provide constant surveillance, not just overhead flights for a few hours. That's where these unmanned blimps came into play, with their ability to linger over an area for days at a time.

Using balloons, blimps and zeppelins in a war zone is not a new idea. The military used balloons for aerial observation posts during the Civil War, and the Germans used zeppelins to drop bombs on England during World War I. Locally, massive blimps regularly patrolled the Pacific Ocean coastline looking for Japanese submarines and other warships during World War II.

After that, the military began opting for helicopters and sub-hunting aircraft, and the demand for blimps, balloons and other airships began to taper off. But they have played an expanded role in recent years in Mideast conflicts. Currently, there are more than 100 aerostats being used in Afghanistan, up from fewer than 10 in 2004.

Resembling small blimps, these aerostats are tethered to the ground and float thousands of feet above military bases and important roadways. They are big enough that gunfire below won't take them down. Cameras on aerostats are similar to those on drones and can see for many miles at a fraction of the per-flight-hour cost of a drone. They're also used to monitor the U.S.-Mexico border.

"It's an affordable solution," said Terry L. Mitchell, intelligence futures director at Army headquarters. "You can provide overwatch of the base or troops as they make their way on the ground." But these less-sophisticated aerostats don't have nearly the size or the capability of the next-generation airships that are being designed and manufactured in California and across the nation.

Pasternak's Aeroscraft being built in Tustin is a zeppelin with a rigid skeleton made of aluminum and carbon fiber. A new type of hybrid aircraft that combines airplane and airship technologies, the Aeroscraft doesn't need a long runway to take off or land because it has piston engines that allow it to move vertically and a new high-tech buoyancy control system. Pasternak runs a hand through his mop of salt-and-pepper hair and points to the spiny monstrosity, boasting of its versatility. "This will land in Africa, Afghanistan," he says, "a Wal-Mart parking lot – wherever."

Pasternak hopes to have a first flight by early next year and to demonstrate cargo-carrying capability shortly thereafter. The Aeroscraft is being built under a contract of around \$35 million from the Pentagon and NASA. That's a tall order for Worldwide Aeros, a company of about 100 employees. But even aerospace giants like Northrop Grumman are seeing the prospects for more airship business. Last month, the company's Long Endurance Multi-Intelligence Vehicle made its first flight. The 302-foot unmanned LEMV could be floating over the battlefield by next year, providing video and data to troops for more than 21 days at a time. Although the airship's first flight had a pilot on board, Northrop's engineers in El Segundo and Rancho Bernardo, Calif., are working out computer programs to reconfigure the lumbering spy ship as a drone.

"Persistent surveillance: That's the mantra," says Alan Metzger, Northrop's program manager for the \$517-million contract. "You can launch one of these for days - even weeks - at a time, and have no gaps in coverage." Some of the military's airship programs haven't had success. The Air Force moved to cancel work on a \$211-million program, dubbed "Blue Devil," after the Vicksburg, Miss.-based contractor Mav6 ran into development problems.

Another Air Force airship, filled with 420,000 cubic feet of helium and air and costing \$8.2 million, floated away and exploded last year when a tropical storm blew in during a test flight in Puerto Rico. Army aerostats have also been lost in high winds.

Public perception of airships has been guarded ever since the giant Hindenburg burst into flames in 1937 in front of news cameras while mooring at Lakehurst, N.J. The explosion of the hydrogen-filled German zeppelin killed 36 people, shocked the public and deflated the chances of lighter-than-air ships becoming a popular mode of travel.

These days, airships are filled with nonflammable helium, but the Hindenburg tragedy remains vivid to many even today. "It's very easy to dismiss airship technology. There is a record of public failure, and it's sometimes difficult to take seriously in the modern era," said Bill Althoff, author of "Sky Ships: A History of the Airship in the United States Navy."

Still, the new materials and technology used in today's airships have greatly increased the vehicles' capabilities, Althoff said. "The virtue of the platform has endured," he said. There is belief among those in the airship business that the technology can take on more civilian roles. Airships already have provided surveillance over the Mexican border for security and on disaster-control missions such as the 2010 BP oil spill on the Gulf Coast.

At Lockheed's facility in Palmdale, work is underway on a 290-foot airship, called SkyTug, to be sold to the commercial market by Canada's Aviation Capital Enterprises. The first SkyTug will be similar to a "super-sized helicopter" capable of carrying 20 tons of cargo. Bob Boyd, Lockheed's program manager for hybrid airships, said the company expects to start the Federal Aviation Administration certification process by the end of the year. A number of companies that need to get cargo to remote areas, such as oil and timber firms, are interested, he said. It takes convincing that the airship is the answer to their problems. "It's hard for people to wrap their heads around," Boyd said. "There are three ways to move cargo: by ship, by truck or by train. Suddenly there's this fourth option."

Lockheed has plans for a larger version, called SkyFreighter, that would be capable of carrying 70 tons of cargo, and an even larger version, called SkyLiner, that would measure 800 feet and be capable of lifting 500 tons of cargo. Within three years, Boyd said, his company could be manufacturing as many as 30 airships a year. "People don't recognize it, but Southern California is the epicenter for hybrid airships," he said. "We'll certainly be filling the sky with something unusual in the coming years."

Next Generation of Pilots:

Hannah Brock – EAA # 1018039

It is hard to think of something to talk about since I didn't go to the last flyin. I am so looking forward to the next breakfast at the airport. I hope the Yaks are going to go up next breakfast and do the missing man formation for Mr. Myers. They are going to be pretty cool when they do it.

Also, I am looking forward to my next flying lesson with Mr. King; he is a very good teacher. He is trying to teach me a lot; I just can't remember all of it. Last month when I went for my lesson, he wasn't there so I am worried that I forgot something since our last lesson. I need to practice with my poster at home. The next flying lesson I am going to have is going to be about the main 6. The 6 instruments in the middle of the airplane. They are the airspeed indicator, altimeter, artificial horizon, turn indicator, vertical speed, and compass.

I hope you had a good Halloween. I did. I dressed up as Tinkerbelle. It was a lot of fun and I got a lot of candy. Next is Thanksgiving. I hear that this time of the year is a good time to fly, the air is better.

I have to go now, it's almost time for bed and I got school in the morning. Hope to see you at the next breakfast. Come say hi to me and Παππους.

Projects Update:

Jim Harchanko
Bob Wilson

RV
Dragonfly

www.flickr.com/photos/rvflyer03/sets/

<http://hiwaay.net/~bzwilson/dragonfly/index.html>

Calendar of Events:

Nov 13	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Nov 17	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Dec 12	1800hrs	Chapter Meeting & Christmas Party	http://eaa190.weebly.com/
Dec 15	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Jan 15	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Jan 19	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Feb 12	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Feb 16	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Mar 12	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Mar 16	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Apr 16	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Apr 20	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
May 14	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
May 18	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Jun 11	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Jun 15	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Jul 16	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Jul 20	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Aug 13	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Aug 17	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Sep 17	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Sep 21-22		Annual Moontown Grass Field Fly-In	http://moontownairport.com/
Oct 15	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Oct 19	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Nov 12	1800hrs	Chapter Meeting	http://eaa190.weebly.com/

Nov 16	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/
Dec 17	1800hrs	Chapter Meeting	http://eaa190.weebly.com/
Dec 21	0730hrs	Fly-In Breakfast at Moontown	http://eaa190.weebly.com/

From the Editor:

Charles P. Cozelos – EAA # 468052

I hope everyone had a wonderful Halloween. Transition. That is never so true. We are transitioning from warm weather flying to cold winter flying where the air is denser, take-off rolls are shorter, aircraft climb better, visibility improves, but don't forget now we also have the possibility of frost. We are transitioning within the chapter. It's unfortunate that we've lost a few members unexpectedly. The work they did must now be picked up by others. Elections are upon us. Both within and outside the chapter. In either case change is upon us. Within the chapter, the majority of the BOD will be new. We will also have new chapter officers.

I know some people don't "change" well. Whatever happens, let's all chip in and provide all the support we can. If you are a chapter leader, I know you welcome the support, if not, remember the leaders of our chapter only follow your lead and can't do it without you.

November; Thanksgiving. I am so thankful to have known each of you both those members still with us, and those departed. You have taught me much. I am also thankful to have a place like 3M5. I think one of the greatest chapters and one of the greatest airports in the country.

To those who know me personally you will understand I am also thankful that Hannah has such an interest in aviation (albeit helicopters). And thank you for allowing her to be "one of the guys" and being great role models for her.

As Always:
Fly Safe & Learn Something New

Donation to the Chapter – Books for sale:

Paul Jacobs has donated some books to the chapter. The thought is that if someone wants one, you can buy it with the proceeds going to the chapter. The books are listed below. If you are interested in any of them, contact any of the chapter officers.

Our Wings Grow Faster	Grover Loening	1935
The Aircraft Treasures of Silver Hill	Walter J. Boyne	1982
US Air Force in World War II	Thomas A. Sieftring	1977
Flying Old Planes	Frank Tallman	1973
Moments of Terror the Story of Antarctic Aviation	David Burke	1973
Fair Weather Flying	Richard L. Taylor	1974
Aircraft Performance	Richard L. Taylor	1991
Human Factors	Richard L. Taylor	1991
Pilot Proficiency	Richard L. Taylor	1991
Aviation Weather	Richard L. Taylor	1991
Congested Airspace	Richard L. Taylor	1991
Instrument Operations	Richard L. Taylor	1991

Aircraft Systems
Men In The Air

Richard L. Taylor 1991
Brandt Aymar 1990

Members Network:

. If you are a chapter member in good standing, feel free to add one (1) line in this section. You may advertise *anything* you wish. The intent is that it will be your business, your company, your house, car, plane, hanger or whatever. It's free and can run forever; the only limiting factor is one line per member per month. If you see something below that you can use, try them out, you'll be helping another chapter member.

Aircraft – 1/3 Share Piper Warrior	Bryan Tauchen	256-852-7505
Aircraft –Jon Moore's	Contact Will Good	256-509-9459
Air Conditioning	Air Comfort Control	256-851-6991
Aircraft Fabric Covering	Brandy & Thomas Michaud	785-250-0873
Aircraft Maintenance	Southeastern Aircraft Rebuilders, Inc.	256-852-9781
Literature	http://www.nickgrantadventures.com	
Pressure Cleaning	ReNew-it Pressure Cleaning	256-682-0251