EAA THE SPIRIT OF AVIATION

2002, 2013 #1 Chapter Newsletter in the Nation

RUNWAY 35

The Official Newsletter of EAA Chapter 35, San Antonio TX

April 2015

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Next Event

Fly-IN Breakfast

11 April 2015

0800

Chapter 35 Clubhouse

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A Viral Infection?

Chuck Fisher

With model names like "Sinus" and "Virus" I have to wonder what the Slovenian designers for Pipistrel were suffering from when they were designing their innovative aircraft. But, after doing a bit of research on the aircraft, and seeing the workmanship in their kits and factory planes...it might be time to catch the illness!

http://www.pipistrelsa.co.za/aircrafts/the-virus-sw-80100/

Allen and Robert Inks invited me to see the Virus SW they are building up at Boerne Stage airport (5C1). Allen, a retired patent attorney likes to fly to our Chapter 35 meetings in a rented Pipistrel Sinus. So, I'd had a chance to ogle the very slick glider-like construction and remarkably roomy cockpit of that aircraft already. The aircraft look like chubby gliders from a distance, so when I read that they are faster and a heck of a lot more efficient than my high performance, complex retractable I just had to see what this century's designs are all about.

Allen became a pilot late in life and jumped into the deep end right away. He rapidly earned his instrument rating and was soon flying a newly painted and refurbished Arrow. He even built a hangar-home for winters in Texas at Boerne Stage. Coincidently, Dave White, Robert Bruce, and Rand Volmer had started San Antonio Light Sport Aviation at Boerne Stage Airfield – and SALSA was an early dealer for Pipistrel

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PRESIDENTS COCKPIT

For Swedish Click Here

To all members of EAA Chapter 35 in San Antonio,

The rescheduled Third Annual San Geronimo Open House, which was cancelled due to bad weather in January, took place on a sunny Saturday in March instead. In the monthly meeting preceding the Open House our Air Academy candidate during 2014, Amanda Pavlich, informed us about her impressions from her nine day summer camp at Oskosh. Included in the visit were EAA seminars, workshops, a helicopter tour and a visit to the EAA museum as well as three days with EAA's Airventure. She was very positive to her visit as one of the about 50 young men and women participating in the Air Academy summer camp. Maarten Versteeg reported that we have received three new candidates to the same Air Academy activities during the summer 2015. The EAA35 Board of Director will select one of them during the next BOD meeting in April.

Chuck Fisher, our Newsletter Editor and also our liaison representative for the Stinson Airport 100 Year Celebration as the second oldest continuous existing general aviation airport in USA, gave a short, interesting historic background of Stinson Airport and the EAA35 activities in this celebration on Saturday April 18.

Philip Vaneau, Young Eagle Chair, informed about the YE rally as part of the celebration. He had commitments for 7 of the 12-15 planes needed and 10 of the 30 ground crew we should have. He needs to have more volunteers from our chapter to be able to accomplish this. Please, contact him as soon as possible, to volunteer on Saturday April 18 from about 8 am to continue over lunch and maybe a little later. His contact information is (210) 887-3135 or pvaneau@gmail.com. Thanks!

At the last monthly meeting Brian Goode, Head CEO of EAA35 Country Store, told us that he has 8 of necessary 10 customer orders for the carbon monoxide detectors, which our Safety Officer Ron O'Dea successfully negotiated down to $107.17 with tax. We need two more customers to be able to make an order for that price.

Steve Jones, EAA 35 Vice President, informed that future meetings will include speakers from FAA Flight Standards District Office (FSDO), a local aviation historian and the rescheduled WW II Wildcat restorer.

The rescheduled Third Annual San Geronimo Open House with walk-around to several hangars and airplane projects started with an initially firm but later fading wind in bright sunshine. It was combined with a Fly-In with more than 8 aircraft flown in from Castroville and New Braunfels, but also all the way from Houston and Dallas. The Open house was very popular with 61 people participating in the preceding lunch and was a big success. More than 10 different aircraft buildings or restorations in different stages were shown outside or inside the hangars. Three of them were aircraft that in the preceding month got their highly appreciated Airworthiness Certificate from FAA (Merlin of Michael Landis and John Latour, RV-8 of Craig Geron and Zenith STOL CH701 of Lex Brown, Thomas Morgan and me).

For the airplane builders with these three new Airworthiness Certificates, the next phase is the 40 hours test flights. In the program letter to accomplish application for airworthiness certificate, a flight test area has to be requested. We requested a circular 37 nautical miles radius area with a center located 13 nm north-west of Hondo to avoid coming to close to San Antonio City. Because Craig Geron has a faster RV-8 aircraft he requested a larger circle with a 50 nm radius. For us with the CH701 we are just now in negotiations with the aviation insurance company about the insurance for the test flights. The insurance company requires, among other things, that the test pilot (and later we, the regular pilots) to have one hour dual instructions by a Flight Instructor in a similar airplane. But since we cannot use our own aircraft, before the test flights are completed, and there does not seem to be any commercially available other CH701aircraft in our area, we are now facing the delicate problem of not being able to start our test flights after 9.5 years of building our aircraft with a brand new airworthiness certificate. I suppose there is a solution to that problem, but, so far, we have not been able to find it. I hope will find the solution within another 9.5 years.

Next meeting will start on Saturday April 11 at 8 am with a Fly-In Breakfast event in our Clubhouse and will continue to 10.00 am. A board of Directors meeting will start at 10.30 am.

Everyone is very welcome to participate in this EAA Chapter 35 Breakfast Fly-In event.

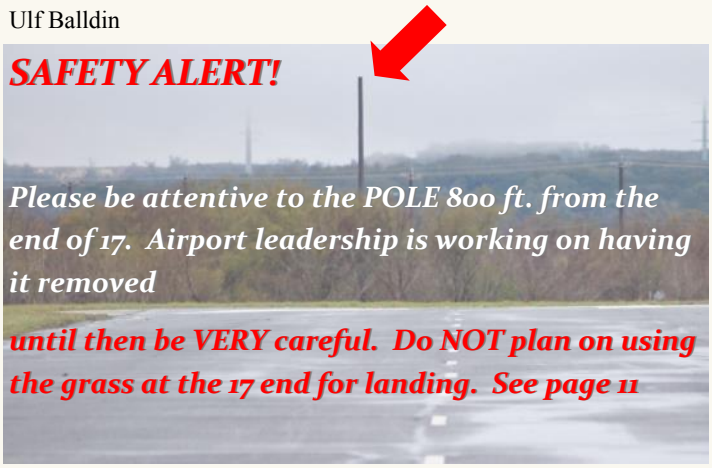
Ulf Balldin

NEW MEMBERS

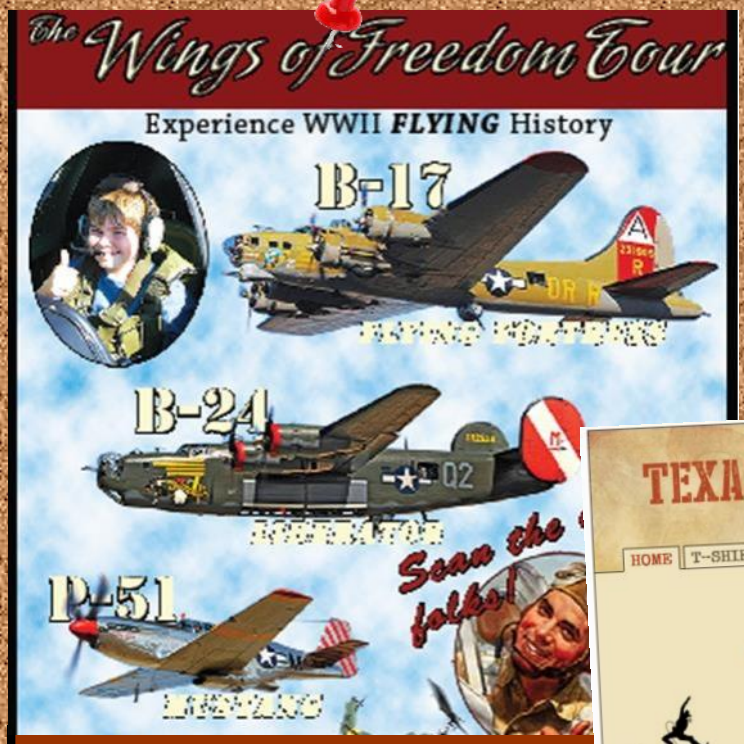
Chapter 35 Continues to grow!

Please welcome new members:

Gary and Susan Gallandt Gary and Susan reside in San Antonio. He is a private pilot and owns a BE-33 Debonair. You may contact Gary at debonair@prodigy.net



CHAPTER BULLETIN BOARD



Fredericksburg, TX April 3 @ 2:00 pm - April 5 @ 5

$12 Adults / $6 Children 12 and under

Walk Through Tour Times (no reservations neede
4/3/2015 – 2:00 PM till 5:00 PM
4/4/2015 – 9:00 AM till 5:00 PM
4/5/2015 – 9:00 AM till 5:00 PM
$12 Adults / $6 Children 12 and under.

Flights take place before and after tours.
30-minute flight on the B-17 or B-24 is $450 per person
30-minute flight training on the P-51C is $2200
60-minute flight training on the P-51C is $3200
10-minute flights in the UH-1 Huey are $80 rear/$100 front

Call 978-562-9182 for flight reservations.

For the April Fly-In Drive in we are going to be flippin' pancakes. Feel free to bring other stuff to share

We could use some help serving and cooking.

Wish for nice flying weather!

Hangar Space Available

Building a Project? Assembling a kit?

Chapter 35 has a First-Class building space NOW available for a nominal fee. There are no more hangars available at San Geronimo, and you are not likely to find a fully equipped wide access hangar anywhere in the San Antonio area. First to contact Lew Mason at *210-688-9072* *lewnan@sbcglobal.net* gets it—hurry!

YOUR Articles Needed

This Newsletter is YOUR newsletter. I put the articles in it, but ***you*** have to write 'em! Your chapter needs YOUR contributions. Please share your experiences, skills and wisdom, photos, humor and announcements with our membership. What may be common knowledge to you, may be priceless for a new pilot or builder. Even if you are not a Pulitzer level author—send me your words, I'll buff up the grammar if needed. Send input to: **eaa35news@gmail.com**

MARCH 2015 OPEN HOUSE












MARCH 2015 OPEN HOUSE















MARCH 2015 OPEN HOUSE















MARCH 2015 OPEN HOUSE















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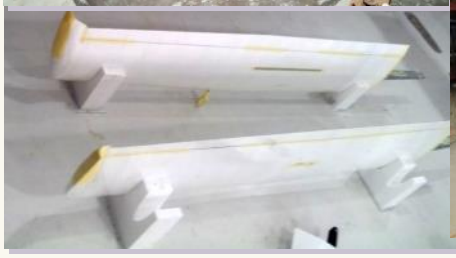
aircraft. So, Allen took a flight and was hooked. Let's see – kit built (non-LSA limited) flies faster than the Arrow, uses half the fuel of the Arrow, simple to maintain, new, modern and experimental…and even brand new was cheaper than an Arrow of any recent vintage….well, that explanation made sense to me too!

He researched not just Pipistrel but oodles of other options (Light sport aircraft and other motor gliders), and settled on the fastest, highest performance of the Pipistrel line-up (at the time) – the Virus SW (short wing). This plane uses a newly developed Rotax engines and, like its siblings, has high efficiency glider-like construction with a spacious cabin for two plus a large luggage compartment. The aircraft will cruise at 140+ kts for nearly 7 hours and with full fuel and has capacity for two well-nourished adults and their luggage.



Pipistrel aircraft are somewhat unique in that they are marketed both as Kits and as factory built planes And, to further complicate things they can be certified as Light Sport Aircraft (made in the Italy factory), Self-Launched Gliders, E-LSA or Experimental Amateur Built aircraft, or as Experimental Exhibition aircraft. The LSA aircraft are obviously governed by limitations on weight and power, but different rules apply to the amateur built experimentals and the self-launched gliders even though they are the same aircraft.

So, Allen decided to maximize his options and build his own aircraft. Along the way he recruited his Merchant Marine brother Robert – who is not (yet) a pilot – to build it with him during his shore time. They became one of only 3 teams in the US currently building a Virus SW from a kit (a Pipistrel dealer in California had previously built a modified Virus SW that won two NASA Centennial Challenges, the Personal Air Vehicle Challenge in 2007 and the General Aviation Technology Challenge in 2008, and one kit has been built in Canada) – and thus began an unexpected journey.

Pipistrel is an enormously inventive group based in Slovenia, but with facilities in Italy and elsewhere. They began as a small manufacturer of ultralight / hang-glider type planes. Because such uncertified aircraft were not permitted by their new government after independence, they test flew the aircraft under the cloak of dusk – earning the moniker Pipistrel from the latin for Bat.

Since then they have focused on high efficiency, environmentally responsible aircraft – from manufacturing (a solar, energy independent facility) through the high performance high efficiency of their aircraft. They have repeatedly earned top honors for their efficiency from NASA and a host of other global agencies. The aircraft, not all of which are available in the US, typically are very slick, extremely rigid but very light due to their near 100% graphite composite construction. The wings are slender, high efficient wings and look like they belong on an aerobatic glider. However, the aircraft are configured as traditional high wing aircraft with a luxurious side-by-side cabin with dual stick style controls. In the US Pipistrel aircraft are powered by Rotax engines, generally 80-100hp mated to high efficiency lightweight props. Many models have fully feathering props for glider use, but some are set up with fixed or electrically adjustable constant speed props props for cruising like Allen and Robert's. One Virus SW even was fitted at the factory with a Rotax 914 turbocharged engine that was used in a round-the-world-flight that included a segment looking down at Mt. Everest. The aircraft can be configured with conventional (tailwheel) or tricycle gear and most feature a ballistic parachute system for added safety.

Allen and Robert's kit arrived in 2013. The quick-build kit is advertised to take about 400 hours to build. And, when it arrives, the fuselage, empennage and wings are fully formed,

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finished and absolutely every piece is machined, packaged and ready to assemble. It is sort of like a big model airplane and looks like a cinch to finish quickly. Ah but… Remember I said Allen and Robert are one of only three teams in the US currently building a Virus SW, and one of the first anywhere to assemble a Virus SW from a kit?

The aircraft kit that Allen and Robert are building is the first ever Virus SW kit's to be equipped with the new Rotax fuel-injected 912 iS engine, and among the first Virus SW's assembled from a kit. Thus, the design was so new that the project has posed unexpected challenges to these first time builders (which I really must make clear have been resolved as the aircraft has matured). Their nose-wheel equipped aircraft arrived with a beautiful assembly manual of full-color photographs showing installation of the various systems, but the photographs in the Inks' manual were actually taken of the assembly of a Pipistrel Sinus taildragger. So, many systems are not the same and use different parts. And, though the photo book is gorgeous, most areas do not identify the part numbers. All bolts look pretty similar in a photo. So, Allen and Robert did a lot of research and spent a lot of time in discussions to fill in the gaps – and in doing so have helped the company to develop a high quality manual for future builders.

Since Allen and Robert's kit was one of the very first ever to use the Rotax 912iS fuel injected engine, as the design has matured the factory has made design changes for safety and efficiency that have required removal, modification and re-installation of some systems. The engine was so new it had to be removed and sent back to the Lockwood Aviation in Florida (Rotax heavy maintenance center) for modification (it's in a box awaiting re-installation).

Fortunately, Allen says "My dealers (Rand Volmer and Dave White of San Antonio Light Sport Aircraft (dealers for all the Gulf Coast states) are great" and factory support via e-mail and Skype has been excellent. There really isn't a huge formal builder community like there is for RV's, but the three current US build teams have kept in contact and share intel between them and the factory. Since each team is building a different component, they have been able to learn from one another. Not many first-time builders can confidently say they've been so instrumental in improving the aircraft they are building.

Allen and Robert only work on the kit a few months of the year, so have no guesstimate when they'll be done – as if any builders ever do. They have completed the wing installation (removable with pins), tail and control surfaces, engine mount, the electrical and control systems and the aircraft is on its gear looking nearly ready to fly. They still have the panel, ballistic parachute, and window installations, engine re-installation, and some plumbing and interior finish to do. All the parts are there, though, so all they have to do is "simply assemble part A to part B" – sounds easy!

Including engine and avionics Pipistrel kits tend to be in the low to mid $100,000 range. Fully assembled, ready to fly factory aircraft are only $10-20,000 more. Right now, with the Euro at a decade low against the dollar, the price has effectively dropped 20-30 percent from when Allen and Robert purchased theirs. This is a good time to buy!

Allen is very pleased with his choice of aircraft and for him, the kit is the right choice. He's really happy to know every millimeter of this aircraft. He reminds me, "The aircraft is great, whether factory built or kit built, are REALLY nice aircraft…very efficient, and surprisingly roomy… certainly more roomy, and with better useful load than a Cessna 152; I feel more comfortable in this aircraft than a Cessna 172 (though I miss being able to grab stuff from a back seat). The factory support people assigned to help kit builders are nice and generally come back with answers to our questions fairly quickly. The kit is very complete, and parts are shipped promptly by DHL."

He cautions buyers, though, to not to use price as the sole reason to choose a kit. Unlike most any other experimental aircraft, for the Pipistrel kits there is an identical factory option for only a few thousand dollars more. But, if a kit-builder wants to use their skills to fairly quickly build a very finely manufactured, highly efficient aircraft; the Pipistrel offers a unique package of relatively low cost and tremendous performance possibly unmatched in the experimental market. The local dealer is San Antonio Light Sport Aviation up at Boerne Stage. Check out the evolving line of high efficiency Pipistrel products available locally at www.salsaaviation.com or give Allen a call.

SAFETY NOTES:

THE SKIDDED FINAL TURN

Ron O'Dea
Safety Officer

Scott McCartt

Early on the morning of June 12th, 2013, a Glasair SH-2F departed Montague airport in California. The purpose of the flight was to familiarize one of the two pilots with the handling characteristics of the aircraft prior to a potential sale. Total flight experience of the two pilots exceeded 7000 hours. Less than an hour later, the inverted wreckage was found in a field by local residents. There were no survivors. The official investigation would cite loss of control while maneuvering as the official cause.

According to FAA statistics (FAA Safety Briefing June 2014), at least twenty-five percent of fatal general aviation (GA) accidents are the result of a loss of control, which continues to be the leading killer of GA pilots (that's you and me). Is this alarming statistic the result of a lack of training, lack of proficiency, or lack of awareness? In my opinion, it's all three. I still remember the look on my instructor's face and the hesitation in his voice when I informed him that I wished to learn to recover from a spin about half way through my private pilot training. He showed me but I'm sure my grade book had a write-up similar to the phrase we used for USAF student pilots who did things that defied logic: NAFOD (No Apparent Fear of Death). It was not then and is not currently a required part of the private, commercial, or even airline transport pilot certification process. To be an instructor, you only have to receive a logbook signature saying you've recovered from spins left and right. This can be done in the widely used Cessna 172, which will stop spinning as soon as the controls are released. The end result is that many of us have never seen more than sixty degrees of bank or thirty degrees of pitch in an aircraft. We've never explored what happens when you overbank a final turn and try to push the nose around with rudder or slip in towards a landing while getting too slow because we're staring at the end of the runway. We've only heard, "Don't stall it in the final turn". Because there is no requirement for in-depth training in these supposedly dangerous areas, there is no flight training and very little academic time devoted to increasing awareness. There is no proficiency at recovering from the extremely unusual attitudes that can result from these excursions. However, your aircraft will be happy to show you these attitudes if you simply get distracted by the radio, another aircraft in the pattern, a checklist, or simply a challenging wind condition. It doesn't take much.

So, what does happen when we over-shoot final because of a tail wind in the final turn or simple miscalculation? Hopefully, the answer is a go-around. The other, unfortunately much too popular answer, is to bank and pull the stick or yoke in an attempt to get the nose tracking back around towards the runway. I'm guilty as charged and have done it, so I'm not throwing stones in a glass house. Our brains quickly rationalize that, "It's not a big overshoot so this won't be a problem". The accident statistics, however, beg to argue. Hopefully, your instructor showed you the over-banking tendency of most aircraft once you get beyond about thirty to forty-five degrees of bank. The aircraft wants to keep on "rolling, rolling, rolling, keep those wingtips rolling." Our little bit of extra bank quickly becomes more than we had planned. The excitement in the crowd begins to build!

Next, we apply back pressure to the stick or yoke in order to bring the nose around more quickly. This increases the angle of attack (AOA) which does increase lift but also dramatically increases drag, causing our airspeed to fall off, decreasing relative wind and further increasing AOA. If you have an AOA gauge, this becomes readily apparent. I wish all aircraft had AOA gauges but that's another subject entirely. What we do have is an airspeed indicator and what we'll notice, if we're paying attention, is that it begins to decrease rapidly as we load the wing. We'll also notice that as we approach the typical light GA aircraft seventeen degree stalling AOA, the airspeed will indicate a good bit higher than the stalls we've practiced in straight and level flight. It may quickly exceed our approach speed. The crowd is giddy with anticipation!

Were we to stall in this condition while in coordinated flight (that pesky ball centered in the goal posts), we'd have a simple accelerated stall and the nose would pitch forward as it does in level flight. The problem we usually have is that we're either still rolling and slightly out of trim or we attempt to push the nose around with inside rudder, resulting in a skid. Now, we have all the ingredients necessary for the classic final turn spin and the crowd is in a frenzy of anticipation. Here's the testable portion: Stall + Yaw = Spin. Remember that. I won't be giving a test but your airplane might.

The problem with a skidding final turn is the airplane reaction at the stall. The airplane will give you little warning before it pops a surprise on you. Because of the skid, the inside wing will stall first and very rapidly. This, coupled with outside wing's lift, causes our

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THE SKIDDED FINAL TURN—(CONTINUED)

(Continued from page 10)

airplane to rapidly roll into the turn. In fact, most of my clients find themselves almost inverted in the time it takes to say "Stall + Yaw = Spin". The nose points down and the windscreen is suddenly filled with nothing but ground. The crowd goes wild and it's complete mayhem. If this had been a real final turn at five hundred or less feet above the ground, our chances of surviving would be somewhere up there with our chances of getting hit by lightning while reclining in the command chair deep inside Cheyenne Mountain. Let's not go there, unless it's at altitude, in an aerobatic certified airplane with a competent instructor aboard. At that point, it's a learning exercise and actually a lot of fun!

How do we avoid this scenario, thereby keeping our story off the list of unfortunate National Transportation Safety Board statistics? First, let's make a promise to ourselves to always go around if we're going to overshoot. Gas is cheap compared to funerals. If we find ourselves rushed, distracted in the pattern, unsure of the situation, or feeling something is just not right, then go around. Give yourself time and distance to assess the situation. Next, let's pledge to not do anything with our airplanes that they are not built to do. Let's also pledge to not do anything for which we've not been trained. Finally, let's promise ourselves not to do extremely questionable and probably illegal things such as low level impromptu airshows or rapid maneuvering without a few thousand feet of air under us. Our awareness and caution levels need to be at maximum as the distance between us and the ground approaches minimums.

Scott McCartt is a retired USAF pilot who was an instructor in both helicopters and fixed wing aircraft. He currently flies Sikorsky S-76C++ helicopters and teaches upset recovery, aerobatics, and tailwheel transitions in his Super Decathlon.

Caution: Runway 17 Obstruction Hazard

Ron O'Dea

I am sure all that fly in and out of San Geronimo Airpark (8T8) are, by now, aware of the utility poles that have been erected on the approach end of Runway 17. Here is a picture (courtesy of James Schlatman) of those poles and there location. Extreme caution is advised as they are difficult to see and you loose sight of them as you get closer.

I am communicating with a Mr. Shoulders who is the Supervisor (A), Obstruction Evaluation Group, FAA SW Region, in Fort Worth. He has designated these poles as "presumed hazard" and instructed CPS to either move, lower, or remove the poles. So far nothing has happened. We are still pursuing the issue with Mr. Shoulders.

Lew Mason, 8T8 Management, has been communicating with the Supervisors at CPS and Pape-Dawson Engineers, the design group for KB Homes. He has assurances that the poles will be changed. He is pushing them very hard to remove them and have the wire put underground.

The process is ongoing and we will update everyone as we get more information. In the mean time use caution.

Stinson Centennial Young Eagles Rally & Education Fair

Phil Vaneau

On Saturday, 18 April, Chapter 35 will be hosting a Young Eagles Rally as part of the City of San Antonio Centennial of Stinson Airport celebration. **WE NEED YOUR HELP!**

We still need volunteer pilots and aircraft especially. If you are an EAA Member and are willing to volunteer to provide these kids with their first flight experience—please plan to be at Stinson on the 18th!

0800 - Pilot Brief

0830-1100 – Registration

0845-1145 - Ground School (30 minute blocks with 25 youth)

0915-1300 - Young Eagle Flights

Throughout the day, Flyers and their family will be able to visit booths that represent local aviation schools and organizations like Hallmark, Palo Alto, Sky Safety, Women in Aviation, etc. There will even be a color guard presentation, a band, food trucks, and other vendors.

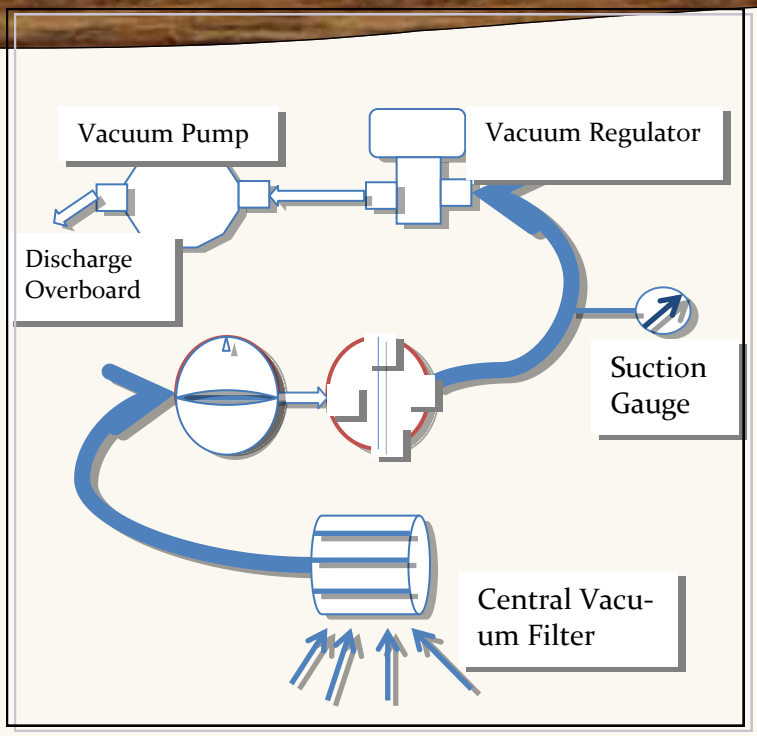
This should be REALLY COOL! So mark 18 April off on your calendar, contact me at pvaneau@gmail.com or (210) 887-3135 to volunteer, and lets introduce some San Antonio youth to Chapter 35 and the wonderful world of aviation!

THE BUILDER'S CORNER

BLUE FUEL SERVO

Mark Julicher

Once in a while you accidently solve a problem and you just scratch your head and say, "Well I'll be…" I recently had one of those accidental solutions. Now doubtless there are many other mechanics that will read this and consider me ignorant and should have known better – I won't disagree with that assessment, but here is what happened.



I had a big, fuel injected Continental that was running just fine, but for some reason the fuel pressure indication fluctuated – more like vibrated—at low RPM. We replaced all the fuel lines and overhauled the fuel pump and these efforts diminished the problem, but it never went completely away. The engine was running fine at idle and making good power at high RPM, so the vibrating indicator just never became an issue. Besides, at high RPM the pressure needle was rock steady and in the green. Call it inexperience, but I just was not worried about the vibrating fuel pressure.

A few weeks ago we were doing maintenance on this engine when we saw fuel leaking past an elbow on the fuel servo. Bad leak. I had fixed this leak about a year earlier by replacing the elbow and had no leak and no problem with engine power, but now it was a repeat write-up and bore close scrutiny – so off came the fuel servo. The servo body had stripped a couple threads and the elbow would not hold anymore. At any rate, the fuel servo was overhauled and indications were that it had been about 25 years since anyone had seen the guts of this servo. This was evidenced by the fact that the internal O-rings were orange, and orange O-rings were taken out of service about 25 years ago. Several new O-rings and other rubber parts later, the servo was re-installed. The engine ran smoother than before – and the fuel pressure indication was steady at low RPM. Well I'll be…

Vacuum System

The instrument vacuum system is actually simple, but often misunderstood. So here is a brief description that may be of help. Let me start at the vacuum pump and work my way "upstream."

Your vacuum pump is usually an engine driven pump although in some instances it is an electric pump. Lets stick with engine driven pumps for now.

The most common engine driven pump is dry, vane-type pump. Inside the dry pump, graphite vanes are spun in an eccentric chamber and move air to produce suction. The graphite vanes wear out in about 500 hours. When the vanes wear out they generally seize the pump body and a frangible drive shaft breaks to cleanly disconnect the pump from the engine. The pump is called a dry pump because it gets no oil to lubricate it, the graphite vanes are self-lubricating. Naturally, particles of graphite are released and blow overboard as this pump operates.

Dry Vacuum Pump photo credit:

Wet Vacuum Pump

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BUILDERS CORNER (CONTINUED)

(Continued from page 12)

Vacuum Regulator With Metal Screen Filter photo

A second type of vacuum pump is the wet pump, so named because it used oil lubrication. The wet pump is gear driven. The ubiquitous O-200 engine is designed to mount a wet pump on a pad under the front of the engine. Wet pumps don't last forever, but it seems like it. It is common for a wet pump to run to TBO on an engine and beyond.

Vacuum Regulator With Foam Filter

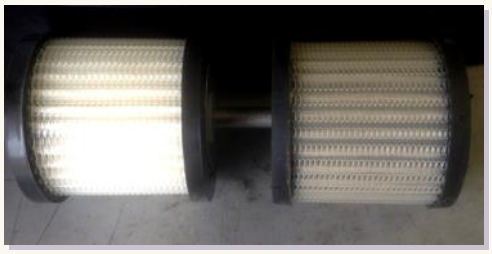
New Garter Filter

No matter if your vacuum pump is the dry or wet type, it produces much more suction than the instruments require. The pump can easily make 12 inches of vacuum, but you know the suction gauge should read somewhere around 5 inches during your run up. The vacuum regulator solves this dilemma. The vacuum regulator is essentially a needle valve which makes a controlled leak in your vacuum line. Once adjusted, the vacuum system upstream of the regulator will see 5 inches of vacuum while the regulator allows extra air into the system which just gets pumped overboard. It is elegant really – make too much vacuum and discard some of it.

The vacuum regulator has a filter on it. Some vacuum regulators just use a small metal screen and others use foam, "garter" filters. Every annual inspection the screen must be cleaned or the garter filter changed. The metal screens tend to collect lint and will clog. Neglect here causes higher than desired vacuum. The garter filter does not easily clog, but if neglected for several years it will crumble and be eaten by the vacuum pump which in turn will probably fail. A garter filter is cheap, a pump is not cheap.

Next, upstream of the vacuum regulator are your instruments. Vacuum instruments have been around a long time and work extremely well as long as they are fed clean air and not abused. The gyros in vacuum instruments have delicate bearings. Two things are definitely known to harm these bearings. They do not like to sit still for years at a time, and they do not like abrupt maneuvers. If you are restoring an old plane you may want to budget overhauls for gyro instruments. If you do a lot of spin training, say in a schoolhouse airplane, the gyros are going to wear faster. Gyro wear is telegraphed by annoying precession of the heading and attitude indicators.

Somewhere in all the plumbing is a tap running to the suction gauge. Speaking of plumbing, it is imperative that the vacuum lines are in good condition. Old rubber gets brittle. If you have some work done under your panel, and shortly afterwards you have vacuum problems, it may be that some old rubber got moved around and then cracked. Worse, if some rubber chips break off inside the vacuum hoses it will go through your gyros on the way overboard. Good vacuum hoses are essential. Furthermore, there is an AD on certain vacuum hoses, so be careful to use approved, quality vacuum line. It pays to go first class here.



Central Vacuum Filters, New and Way Past Due

Upstream of all of the preceding is a central vacuum filter. The central vacuum filter cleans all the air entering the instruments. This filter is about the size of a fist and is a pleated paper filter. A new central vacuum filter is white. Very white. Not sort of white. The central vacuum filter is good for 500 hours. Sooner than that if you smoke in your plane. Check your log books. If you can't figure out when the central vacuum filter was last changed, change it. It costs 15 or 20 dollars and it is money well spent.

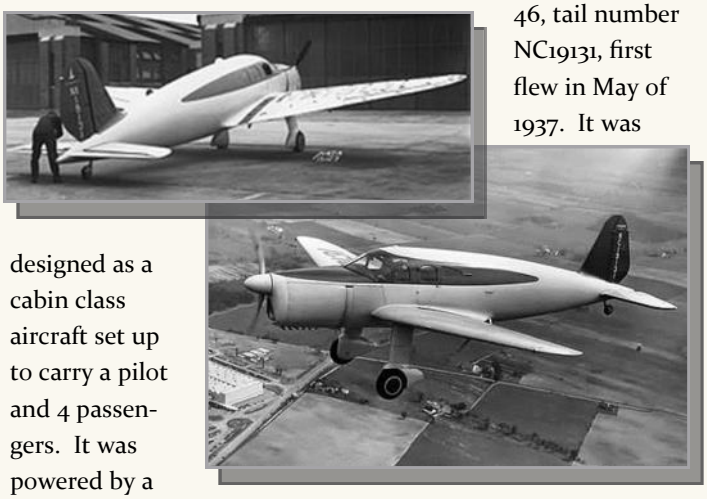
One last word. On most certified planes, the two filters mentioned above are sort of a pain to change because they are located in hard to reach places. Often they get "overlooked." If you are building a plane think about how you will access these filters. You will be glad you did.

MARCH MYSTERY PLANE REVEALED

By Doug Apsey

No one attempted to solve our March mystery airplane but I admit it was a tough one since only one was built. Also the photograph I used was not very revealing but there are very few available of this extremely rare airplane.

Our mystery plane is the Fairchild F-46. The one and only F-46, tail number NC19131, first flew in May of 1937. It was designed as a cabin class aircraft set up to carry a pilot and 4 passengers. It was powered by a 420 hp Ranger engine giving it a maximum reported cruise speed of178 knots. Maximum take-off weight was 4800 lbs. In 1947, the prototype F-46 was re-engined with a Pratt and Whitney R-985. NC19131 is currently registered to an owner in Oregon and it appears that it either has or is undergoing restoration by Big Sky Stearman of Oregon City, Oregon. You can check out a few pictures of it on their web page. http://www.bigskystearman.com/



Fairchild F-46 with original Ranger Engine
http://1000aircraftphotos.com/Contributions/

The F-46 was also known as the Duramold Aircraft Corporation F-46 A and I chose this airplane as our mystery airplane mainly because of its' unique construction. The F-46 was built using the Duramold process developed by Virginius E. Clark in 1937. This building process used heat, pressure, wood and resin to mold the aircraft structures. Birch or poplar plies were impregnated with phenolic resin then laminated together in a mold by heat and pressure. In addition to saving precious metals such as aluminum and steel during the war years, Duramold saved weight, was easier to work with than aluminum for some aircraft parts, and was stronger than metal in some applications. For example, a cylinder made of Duramold is 80% stronger than a cylinder made of aluminum.

This same process was used to build the Fairchild AT-21 aerial gunner trainer. Fairchild built 175 of these between 1943 and 1944 but the aircraft proved unsuitable for its' intended role and they were pulled from service in 1944. Two AT-21's were modified into BQ-3's in 1944. These were remote controlled "assault drones" capable of carrying 4000 lbs. of explosives. I guess when you have 175 aircraft that don't suit your needs you try making them into something else – like flying bombs! Apparently they were not too useful for this mission either because the program was dropped that same year.

Certainly the largest and most famous aircraft ever built using the Duramold system was the Hughes H-4 Hercules, aka the "Spruce Goose." Howard Hughes purchased the rights to the Duramold process to use in the construction of the gigantic airplane and the majority of the airframe was built using this technique.

Information for this article came mainly from Wikipedia.

NAME THE PLANE

While sitting in my office on Friday, March 13th, I looked out my window and saw this strange cloud formation. Naturally, being Friday the 13th , I quickly assumed what anyone would assume while looking at this strange site – the world was about to come to an end! But it didn't so I thought I would do a little research into what causes such an unusual cloud formation and I'll reveal what I found out to you next month.

But until then,

Who else saw this on March 13th sitting over San Antonio?

Who can tell us what this cloud formation is called?

How is it formed?

Why did it appear only on the second Friday the 13th of 2015? ;)

Country Store

Brian Goode

SHIRT NEWS

Our shirt inventory has gone down a little. At the same time we have taken new orders for sizes not in inventory. In order to process the new order we must have orders for 12 shirts in order to get our price break. So if you have a shirt on order, please be patient, we just need a couple more orders from members and I will order them.

If you forgot to place an order for a new shirt, we now have five (5) shirts in inventory, so stop by the Country Store at the next meeting and pick one up. Here's what we have in inventory: Short Sleeves – Yellow –men's L, Ladies' short sleeve - XL, Khaki –Men's L, Royal Blue – Men's XL Long Sleeves–Sky Blue –Men's M. All of these shirts are now reasonably priced at $43.00. The new ones are $47.00.

If you can't wait, give us a shout – Brian Goode 727-709-1159 or ladybgoode@msn.com.

POCKET CO – CARBON MONOXIDE DETECTORS

Our initial order of 10 "POCKET CO – CARBON MONOXIDE ETECTORS" has been delivered and paid for. At our last Chapter meeting, we announced that we would order more of them if we received commitments for an additional 10 units. We have now received orders for 8 units, so we only need an additional 2 more commitments before we can place another order. We can order more than 10 at a time so don't hesitate to dial up and order one, or two, or more. One for each aircraft and one for each surface vehicle. Electric vehicles should not need one.

These units are being sold to our Chapter 35 members at cost + sales tax + shipping, which amounts to $109.00. We accept cash or checks. These usually sell for $147.00.

LOG BOOK TOTE BAGS

We still have some log book bags available. They are good for storing your aircraft log books, your laptop computer, iPad or personal "stuff" when traveling.

These Tote Bags are adorned with the Colorized Chapter 35 logo on the front flap. They are made of a heavy Polyester material and are 17" wide X 13" high x 4.5" deep. They have an expansion zipper which lets the bag open up to about 6.5 inches deep. They also have a convenient adjustable shoulder strap. They are only $29.00. The pilot stores sell these for $60.00+.

MERCHANDISE FOR SALE AT THE COUNTRY STORE

Pocket Carbon Monoxide Detector	Order Only	$109.00
"Fishing Shirts" (Inventory) 4 Men's	Short sleeve	$43.00
1 Men's	Long sleeve	$43.00
1 Lady's	Short Sleeve	$43.00
"Fishing Shirts" New Orders	New Orders	$47.00
Log Book Tote Bag w/Chapter 35 logo	Black	$29.00
Young Eagles Tee Shirts	Youth Sizes	$5.00
Cloth Baseball Caps	EAA or Chapter 35	$11.00
Mesh Top Logo Baseball Caps	Close out item	~~$4.00~~ $3.00
Chapter 35 Sew-On Logo Patches	Price reduced	$2.00
Chapter 35 Bumper Stickers		$1.00
Wheel Chocks - Aluminum	Two pairs = a set	$45.00
"Wash Wax All" Cleaner or Degreaser	Pint -16 OZ	$16.00
	Quart -32 Oz	$65.00
Mop Head with Pads	Washable	$11.00
Scrubbing Pad with Handle	Reusable	$43.00

All prices include 8.25% sales tax For merchandise please call Brian or June @ 210-688-0420

2014-15 EAA Chapter 35 Leadership

Officers

President: Ulf Balldin	*210-663-7391* *uballdin@gmail.com*	**Vice President:** Steve Jones	*(210) 570-9435* *eaa35vp@gmail.com*
Secretary: Darren Medlin	*210-875-9971* *dmedlin@aol.com*	**Treasurer:** Dee Brame	*210-493-5512* *DeeB@satx.rr.com*

Board of Directors

Past Presidents		At Large	
Nelson Amen	*210-834-1991* *nelson.p.amen@gmail.com*	Brian Goode	*727-709-1159* *ladybgoode@msn.com*
Lew Mason	*210-688-9072* *lewnan@sbcglobal.net*	Ron O'Dea	*210-488-5088* *r2av8r@gmail.com*
Dave Baker	*210-410-9235* *iflyaerosport@sbcglobal.net*	Chuck Fisher	*210-878-5561* *cfisher555@aol.com*

Chairpersons

Facilities: Gail Scheidt	*210-688-3210* *gailps@att.net*	Newsletter Editor: Chuck Fisher	*210-878-5561* *eaa35news@gmail.com*
Air Academy: Maarten Versteeg	*210-256-8972* *Maarten.Versteeg@sbcglobal.net*	Garden & Grounds: Nancy Mason	*210-688-9072* *lewnan@sbcglobal.net*
Board Advisor: John Killian	*830-438-9799* *jmkillian1@gmail.com*	Builders Academy: Lew Mason	*210-688-9072* *lewnan@sbcglobal.net*
Young Eagles: Philip Vaneau	*(210) 887-3135* *pvaneau@gmail.com*	Aircraft Builders: Craig Geron	*210-372-1217* *rv8@satx.rr.com*
Tool Crib: Lew Mason	*210-688-9072* *lewnan@sbcglobal.net*	EAA Hangar: Lew Mason	*210-688-9072* *lewnan@sbcglobal.net*
Website: Dave Baker	*210-410-9235* *iflyaerosport@sbcglobal.net*	Membership: Ron O'Dea	*210-488-5088* *r2av8r@gmail.com*
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Flying Start: *Vacant*		June Goode	*727-439-1159* *junegoode@msn.com*

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Ron O'Dea	*210-488-5088* *r2av8r@gmail.com*		

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		Lew Mason	*210-688-9072* *lewnan@sbcglobal.net*

Safety Officer

Ron O'Dea *210-488-5088* *r2av8r@gmail.com*

CHAPTER CALENDAR

APRIL 	11	**FLY-IN BREAKFAST EVENT** **Chef, Prep Cooks, Servers Needed** BOD Meeting	8:00 - 10:00 am 10:30 am
	18	*Young Eagles Rally – Stinson 100-Year Anniversary* **All hands on deck!** 	*Pilot/Safety Brief 8:00 am* *Rally Begins 9:00 am*
MAY	9	SPRING CLEANING! Yard/Chapter Building Work Party	10:00 am – 12:00 pm Lunch Served at Noon
	23	*Fly-out Event – Mooney Factory Tour* 	*8T8 Wheels up: 11:00 am* *Arrive KERV ~ 11:30 am*
JUNE	13	 ANNUAL CHAPTER 35 PICNIC Chef, Prep Cooks, Servers Needed	EAA Chapter 35 Clubhouse 11:30 am to?
JULY 	11	**FLY-IN BREAKFAST EVENT** **Chef, Prep Cooks, Servers Needed** BOD Meeting	8:00-10:00 am 10:30 am
AUGUST	8	LUNCH MEETING Presenter: TBA	Lunch 11:30 am Meeting/Program 12:30 pm
SEPTEMBER	12	LUNCH MEETING Presenter: TBA	Lunch 11:30 am Meeting/Program 12:30 pm
OCTOBER	10	LUNCH MEETING Presenter: TBA BOD Meeting	Lunch 11:30 am Meeting/Program 12:30 pm 10:30 am
NOVEMBER	14	ANNUAL CHILI COOKOFF EAA Chapter 35 Fly-mart Annual Membership Meeting and Election of Officers Lunch and Chili Judging	10:00 – 11:30 am 11:30 am Immediately following the meeting
DECEMBER	12	CHRISTMAS PARTY Christmas gathering 11-12 Lunch catered Gift Exchange ~$10 target for gifts but that's up to you!	Social Hour 11:00 pm Lunch Served Noon-1:00 pm Gift Exchange 1:30 to 3:00 pm

Airventure 2010
C Fisher

For Sale Aerosport Quail- -N56JT- - A very rare homebuilt. Only 3 flying that I can find. Built 1977---TTAC-466.0 hrs.-- Cruise 110 mph, fuel burn 3.5 gph . All Metal, Cantilever Wings---VW 1600 cc Engine--59.5—SMOH—Prop 11.8 TT; VFR Instruments and GPS---Hand Held Radio w/ Headset; BRS 900 installed* (re-pack due) or remove and have 20lb baggage. Sale Price -----$ 8,500 OBO Fresh condition inspection included with purchase! Contact: Dave Baker-Ph-210-410-9235, e-mail: iflyaerosport@sbcglobal.net *(expires Apr 2015)*

For Sale: RV-7 Quick Build Project—Includes QB wings, QB fuselage, empennage, and finish kit. Empennage finished except for tips. QB wings and QB fuselage nearly complete. Tip-up canopy finished except for fiberglass work. Numerous accessories already installed. Airplane is ready for engine and avionics. Reason for selling: Buying an RV-8. Included Equipment List: Empennage kit, QB wings, QB fuselage, Finish kit, and a long list of extras, $37,500. OBO, Contact Jim Gibson: jwgibson10@hotmail.com, (210) 262-3741 *(expires JUN 2015)*

Reduced for quick sale!! **Teeter Hang-Ups Exercise equipment** ---Like New. $ 550, **DAVID CLARK Headsets**- Make Offer. Contact Jeanette Hunt at 210-688-9264 or e-mail Ja-Net3679@aol.com. *(expires Apr 2015)*

Hangar for rent at San Geronimo, available 1 April 2015. It's 40X32', on the runway and has electricity and water. Call 210-710-6063 for info *(expires Jul 2015)*

Cozy MK4 for sale. After 14 years of enjoyable flying and 7 years of building before that , I am pleased to offer my Cozy for sale. It has over 700 hours since the maiden test flight supervised by Skip Barchfield at Hondo field. Many EAA Chapter 35 members gave advice, and inspections during the construction that I will always be thankful of. The Cozy is powered by Lycoming 360, 180 HP normally aspirated engine rebuilt in 2000, normal cruse is 175 MPH. I use a mounted I-Pad for navigation, and a wing leveler for long trips. The paint is still exceptional. Great flying , great looking. Call Jon Farr at 210-602-3351

To post a classified—contact the editor at eaa35news@gmail.com

- ***You must be an EAA Chapter 35 member.***
- ***Ads are FREE and will run for 3 Months from the last date you re-verify that the item is still for sale.***
- ***PLEASE Notify me when your item sells!!***
- ***You must contact the editor by e-mail or phone to extend your ad beyond the expiration date***

Upcoming Events (200 mi of 8T8) and Airshows

Aviation Calendar of Events websites

Aero Vents	http://AeroVents.com
EAA	http://www.eaa.org/calendar
Fly-ins	http://www.flyins.com
Fun Places	http://funplacestofly.com

International Council of Air Shows
https://www.airshows.aero/Page/ASCalendar

Apr 3-5,	*Collings Foundation Wings of Freedom Tour, B-24, B-17, P-51 (T-82)*
Apr 4	*Airport Day, 10:00 AM to 2:00 Gillespie County—T-82*
April 04	*EAA 59 Pancake Breakfast (Fly-In) McGregor Executive - Waco, TX*
Apr 10-12,	*Texas STOL Roundup Llano Municipal (KAQO)*
Apr 16, 2015	*IMC Club Monthly Chapter Meeting San Marcos, TX Redbird Skyport*
April 18th - 19th	*Wings Over Southern TX Air Show NAS Corpus Christi, TX USN Blue Angels*
Apr 23-26,	*T-6 Formation Clinic Gillespie County (T-82)*
May 1st - 3rd	*Central Texas Airshow Temple, TX*
May 2nd - 3rd	*Dyess Big Country Airfest Abilene, TX USAF Thunderbirds US Army Golden Knights*
May 01, 2015	*3rd Ann Lone Star Maule Roundup Llano, Texas (KAQO)*
May 15-16	*5th Armed Forces Weekend Fly-In Curtis Field (KBBD) Brady, TX.*
June 6th - 7th	*The Heart of Texas Airshow*

Advertisement Prices for EAA 35 Newsletter

Size (percent page)	Monthly	Per YEAR	Savings
10% (business card size)		$ 35.00	
25%	$ 8	$ 86.40	10%
50%	$ 15	$ 153.00	10%
100%	$ 30	$ 324.00	15%

This space could be yours!

To place an ad, please contact the editor at EAA35news@gmail.com or Dee Brame at DeeB@satx.rr.com

Ron O'Dea, Membership Chairman
15464 FM 471 W., #14
San Antonio, TX 78253

The Official Newsletter of EAA
Chapter 35, San Antonio, TX

Chapter 35 meets

Each Second Saturday of the Month

EAA 35 FLY-IN BREAKFAST

11 APRIL 2015

Serving begins at 0800

Chapter 35 Clubhouse

EAA Chapter 35 is part of the worldwide network of EAA chapters. EAA embodies the spirit of aviation through the world's most engaged community of aviation enthusiasts. EAA's 170,000 plus members enjoy the fun and camaraderie of sharing their passion for flying, building and restoring recreational aircraft. Our clubhouse and building facilities are located at San Geronimo Airpark (8T8) located off FM 471 (Culebra Rd) West of San Antonio.

For over 50 years Chapter 35 has represented aviators of creativity who share a passion for flying. Come join us!

[Click Here for Link to 8T8 on AirNav.com]

PRESIDENTER COCKPIT

For English Click Here

Till alla medlemmar i EAA Kapitel 35 i San Antonio,

Den omlagda tredje årliga San Geronimo Öppet Hus, som avbröts på grund av dåligt väder i januari, ägde rum på en solig lördagen i mars i stället. I den månatliga mötet som föregår Öppet Hus vårt Air Academy kandidat under 2014, Amanda Pavlich, informerade oss om sina intryck från hennes nio dagars sommarläger på Oskosh. Ingår i besöket var EAA seminarier, workshops, en helikoptertur och ett besök på EAA museum samt tre dagar med EAA: s Airventure. Hon var mycket positiv till hennes besök som en av de cirka 50 unga män och kvinnor som deltar i Air Academy sommarläger. Maarten Versteeg rapporterade att vi har fått tre nya kandidater till samma Air Academy aktiviteter under sommaren 2015. EAA35 Styrelsens kommer att välja en av dem under nästa BOD möte i april.

Chuck Fisher, vårt nyhetsbrev Redaktör och även kontaktperson representant för Stinson Airport 100 år firande som den näst äldsta kontinuerligt existerande allmänflyg flygplats i USA, gav en kort, intressant historisk bakgrund av Stinson flygplats och de EAA35 verksamhet på detta firande på lördag April 18.
Philip Vaneau, Young Eagle ordförande informerade om YE rally som en del av firandet. Han hade åtaganden för 7 av de 12-15 plan behövs och 10 av de 30 markpersonal som vi borde ha. Han måste ha fler volontärer från vårt kapitel för att kunna åstadkomma detta. Vänligen, kontakta honom så fort som möjligt, att frivilligt lördagen den 18 april jämfört ca 08:00 för att fortsätta under lunchen och kanske lite senare. Hans kontaktuppgifter är (210) 887-3135 eller pvaneau@gmail.com. Tack!

Vid det senaste månadsmöte Brian Goode, chef VD för EAA35 Country Store, berättade att han har 8 av nödvändiga 10 kundorder för kolmonoxid detektorer, som vår säkerhetsansvarige Ron O'Dea framgångsrikt förhandlade ner till $ 107,17 med skatt. Vi behöver ytterligare två kunder för att kunna göra en beställning för det priset.

Steve Jones, EAA 35 Vice President, informerade att framtida möten kommer att omfatta talare från FAA Flyg Standards District Office (FSDO), en lokal flyghistoriker och omlagda WW II Wildcat konservator.

Den omlagda tredje årliga San Geronimo Öppet hus med walk-around till flera hangarer och flygplansprojekt började med en initialt fast men senare bleknar vind i strålande solsken. Det kombinerades med en Fly-In med mer än 8 flygplan flugit in från Castro och New Braunfels, men också hela vägen från Houston och Dallas. Den Öppet hus var mycket populär bland 61 personer som deltar i föregående lunch och blev en stor succé. Mer än 10 olika flygplans byggnader eller restaureringar i olika stadier visades utanför eller innanför hangarerna. Tre av dem var flygplan som i föregående månaden fick sitt mycket uppskattade luftvärdighetsbevis från FAA (Merlin Michael Landis och John Latour, RV-8 i Craig Geron och Zenith STOL CH701 av Lex Brown, Thomas Morgan och mig).
För flygplansbyggare med dessa tre nya luftvärdighetsbevis, är nästa fas de 40 timmar testflygningar. I programmet brevet att åstadkomma ansökan om luftvärdighetsbevis, har en flygtestområdet kommer att begäras. Vi begärde en cirkulär 37 nautiska miles radie område med en central belägen 13 nm nordväst om Hondo att undvika att komma för nära San Antonio City. Eftersom Craig Geron har en snabbare RV-8 flygplan han begärt en större cirkel med en 50 nm radie. För oss med CH701 vi är just nu i förhandlingar med flyg försäkringsbolaget om försäkringen för testflygningar. Försäkringsbolaget kräver bland annat att testpilot (och senare vi, de vanliga piloter) att ha en timme dubbla instruktioner av en flyginstruktör på ett liknande flygplan. Men eftersom vi inte kan använda våra egna flygplan, innan testflygningar är klara, och det verkar inte finnas någon kommersiellt tillgänglig annat CH701aircraft i vårt område, står vi nu inför det känsliga problemet med att inte kunna starta våra testflygningar efter 9,5 år av att bygga våra flygplan med en helt ny luftvärdighetsbevis. Jag antar att det finns en lösning på det problemet, men hittills har vi inte kunnat hitta den. Jag hoppas hittar lösningen inom ytterligare 9,5 år.

Nästa möte kommer att starta lördagen den 11 april kl 08:00 med en Fly-In frukost händelse i vårt klubbhus och kommer att fortsätta 10:00. En styrelse Mötet börjar klockan 10.30.

Alla är varmt välkomna att delta i denna EAA kapitel 35 Frukost Fly-In händelse.

Ulf Balldin