



June 2013

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Inside this Issue

Presidents Cockpit	2
I learned from That	9
Your Health	10
Name the Plane	11
Builders Corner	12
May's Answer	13
Bulletin Board	14
Country Store	15
Contacts	16
Calendar	17
Classifieds	18
Sponsors	19

Next Event
June 8th

Annual Chapter

Picnic

11:30

Chapter 35 Clubhouse
at 8T8

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To Sun & Fun

Brian Goode

It was a dark and gloomy morning at 8T8 when we made a final check of the weather en route to Florida and calmly decided to wait another day to launch on our planned visit to the Sunshine State.

This seems to be the way a lot of our trips start out, wait and see. That is wait a while and see what the weather is going to do. We have found that there is no sense in busting your keisters on a fun trip.

We finally departed 8T8 on Thursday morning April 4th, instead of the earlier



planned Wednesday departure day. We had filed for an IFR departure time of 0912, and were able to be fairly close to that time.

Contacting San Antonio clearance delivery by cell phone on the ground got us the ex-

(Continued on page 2)

Das Dumkopf Kluckenfluger

Chuck Fisher

Memorial Day weekend 2013 turned out to be a wet one – really wet, with typical San Antonio deluges and low water rescues at the usual places. For EAA 35 members that translated to soft taxiways and unpredictable ceilings. However, the “open hangar” invitation still applies. This Memorial Day I found Lew Mason’s hangar



open, and I wanted to learn more about an all wood aircraft anyway. So, this is a story of Lew and his Fly Baby turned Junkers trench straffer.

I suppose pretty much everyone in EAA 35 knows Lew. He is always active in anything

(Continued on page 5)

JUNE 8th Annual Chapter Picnic

Hamburgers and Hot dogs provided

Share your best side dishes!

Cooks/Volunteers welcome (always!)

Serving times: noon until 1:30

Have a safe and Happy Summer.



PRESIDENT'S COCKPIT

Chapter 35 Friends,

Our Chapter was active during the month of May with two major events: a spring cleaning day at our Chapter building on the 11th and the Hondo Fly-in on the 18th. Both events exemplified the “can do” attitude of our membership and the benefits each of us realizes when we are able to spend that extra time with our friends and pilots. We should all take pride in the level of participation exhibited.



Many members of our team spent considerable time preparing for these two events, and special thanks go to all of those who completed all of the behind-the-scenes work. This involved prepping the materials and supplies, creating work lists, and managing the many duties of our volunteers. This extra effort allowed the rest of us to effectively contribute our time ... and enjoy the results.

I have set aside the month of June for us to form our nomination committee, and for the Chapter to consider any current members for the Officer positions during the next two year term (2014 and 2015). Please feel free to contact any of the current officers (Nelson Amen, Doug Apsley, BJ O’Dea or Dee Brame) or any of our current Chairpersons with your input. We’ll make sure your feedback is discussed by our nomination committee. And thanks!

In addition to the above, we have a Board of Directors meeting scheduled after our fly-in breakfast on July 13th and as in the past, I am keeping this an “open meeting” for our members if any of you wish to observe our efforts. As a reminder (and for your calendar), our annual general membership meeting occurs in November.

On a personal note, I had the privilege during the Hondo Fly-in to sit the cockpit of the P-40N that was flown on Saturday. What beautiful sights and sounds. This is the exact model that my father flew in the China-Burma theater in the 1940’s with the Air Force Flying Tigers. It was a once-in-a-lifetime experience (there are only four flying P-40’s in the world). Yes, I got just a little misty eyed. Thanks, dad.

Be safe, fly safe, taxi safe, fly happy,

Nelson Amen

SUN & FUN (CONT)

(Continued from page 1)

act route we had filled the day before using the new AOPA FLYQ Flight Planner. We departed runway 35 and contacted departure control, who immediately turned us to a westerly heading instead of the 1700 departure heading we had received on the phone.

We climbed through the several layers of clouds and broke out



on top just below 6000 ft. We remained at that altitude most of the day as the winds aloft

were favorable there. After a torturing 5 minutes on the westerly heading, Houston Center finally gave us a “left turn on course.” We then proceeded towards the Victoria VOR at 160 KTS ground speed. Soon after passing Victoria we were given radar vectors around CitationJet traffic, which we never saw and then “direct destination.” We did that on top of the overcast at 160 KTS average ground speed. It sure is nice to be able to suck up the wheels and GO sometimes.

After shooing the ILS approach into Hammond, Louisiana, we borrowed the FBO courtesy car and drove a short distance to a sub shop for a quick bite before climbing back into the clouds for the second leg.

The second leg of the day put us back at 6000 feet for most of the time until the clouds built up around us and June insisted that we get a clearance to try 8000 ft. I did just that and our ground speed picked up to 170 KTS. Thanks June. All went smoothly with ARTCC until we approached Gainesville, FL. At that point JAX Center asked me where I was going, to which I replied with the clearance I had been given. He promptly told me that was not the route he had on his strip and wanted to know what I wanted to do. I then asked for direct Daytona and he said that was “not going to happen.” I don’t know if those words are in the air traffic controllers list of approved gobbledygook, but we negotiated an agreeable routing and everybody was happy. He even had us landing at the wrong airport. Oh well, stuff happens!

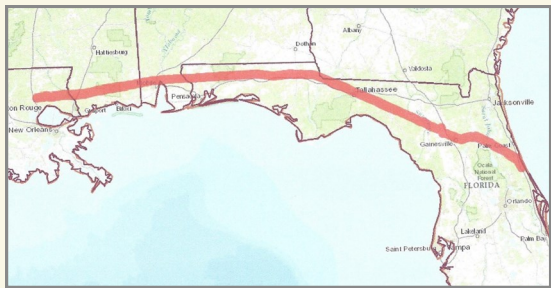
After another instrument approach we taxied up to the ATP Jet

(Continued on page 3)

SUN & FUN (CONT)

(Continued from page 2)

Center, picked up our rent-a-wreck and proceeded to the local Marriott Courtyard on the airport. ATP usually slips our little Wichita Spam Can into their spacious hangar at a nominal or at no charge while we are visiting friends and relatives in the off-season. I would not expect this to happen when all of the Snow Birds are in town, or during a race week at the Daytona International Speedway.



During the next couple days we spent some quality time with June's step-father, who resides in Palm Coast and her son Michael who lives just south of the Spruce Creek Airport in New Smyrna Beach. Mike has this Pit Bull named Bonehead, who would rather sit in your lap and lick you than go chase a squirrel. Dumb, but super friendly, for a pit bull. We were also able to get in touch with some close friends who live in a little unincorporated section of Brevard County, just south of Cocoa. We drove out to Cape Canaveral and dined on Grouper at Milliken's Reef restaurant on the water overlooking the cruise ship docks and the Air Force missile launching facilities at the Cape. The NASA Space Shuttle launch pads are a lot further north of this.

We took a side trip to visit June's nieces and grandniece in Stuart by flying right down the beach. We received VFR flight following and were handed off from tower to tower all along the way down to SUA at 3500 ft. and back at 4500 ft. We also flew right over our former home in Melbourne and did not shed a tear.

On Monday morning, with nothing planned, we drove over to the Spruce Creek Fly-In Airport. We were greeted by one of the transplanted, retired TWA pilots, now a realtor, who took several hours to show us around the airpark. He had four hangar/homes lined up for us to look at. They were all 1980's vintage, built right on top of each other. One garage and hangar floor were completely tiled in ceramic tile and air conditioned as well. Another did not have a garage, so you would have to park your four wheelers in the hangar. The homes we looked at were all just under \$1M, each. They were the least expensive proper-

ties available for resale. We did see a couple of small Jets as well as RV's and P-51's sitting around. We saw two empty lots that were going for \$200,000.00 apiece. They were both well less than ½ acre.

We did not know before we went over there, but they have three different sections in the Spruce Creek community; the airpark section, the golf course section and the nature section. Neither the golf course section nor the nature sections have direct runway access. There are what they call commercial hangars available for purchase if you would rather live on the golf course and also have an aircraft. The runway people do not have direct golf course access, but can join the Country Club. The commercial hangars sell in the \$250,000.00 range. It is June's opinion that a person would really have to want to live there. I happen to agree with her. We prefer to live where we are, San Geronimo Airpark, 8T8.

Early to rise on the opening day of Sun N Fun, April 9th, we arrived at the Daytona Beach FBO at 0720, before anyone else and had to wait for someone to open the hangar and dig our Cutty out. No complaints, since the hangar storage was free this trip. We asked for, and received, from Daytona Beach Clearance Delivery, VFR flight following to Lakeland, where we followed the Lake Parker VFR arrival chart, following traffic ahead of us and landing without getting yelled at by the tower. The tower controller said "welcome to sun n fun" when we landed at 0900. I had made up a sign, per the arrival procedures, which we placed in the windshield for the volunteer staff of traffic Marshalls to see, indicating that we wanted to park at the FBO on the north side of the airport. We had planned to get there early, park at the FBO, do our shopping, and depart for Sarasota before the air show started at 3:00 PM.

This was not the thing to do, as we found out. The line boy at the FBO advised us that they didn't have any ground transportation around the field to the show grounds, but taxi cabs were available, and that the FBO would have to charge us a large parking fee just to park on the concrete. So we fired up our trusty steed, contacted ground control and received very polite progressive taxi instructions around the east end of the field to the "GAP" area at Sun N Fun. There were bunches (groups) of orange vested volunteers marshaling us to the grass parking area. Very helpful guidance indeed. We passed one sign on the taxi route that simply said "Do not park in the ditch."

The first person that spoke to us upon our arrival at the desig-

(Continued on page 4)

SUN & FUN (CONT.)

(Continued from page 3)

nated parking area was a little old lady in a golf cart that very politely asked us if we have tie downs. We acknowledged that we did as she sped off down the line. After properly securing the aircraft to the turf, we were directed to the Mobile Registration Van, where we were greeted by two gentlemen volunteers in a van, with fluorescent green vests on who promptly took our \$25 each and strapped that day's wrist bands on us. We then mounted the local tram which took us to the tram station close to the beginning of the aircraft display area. We then had to cross the creek to get to the display hangars so we could SHOP.

We made our way past many outdoor displays to get into the hangars, which were by now, elbow to elbow. Mind you, it is still before 10: AM, and the place is packed, jammed packed. We wound our way through all of the hangars, looking for a deal on a new GPS. None was to be had. After struggling with our screw type tie downs earlier that morning, which work well in soft ground, we bought a set of "Claw" tie downs. We have yet to use them, but they seem easy to install and remove. I have made clips for one end of the tie down line, so we only have to tie one knot on each of them. After struggling with the Looky-loos and the Whistling Golly's, we found our way to the food court and ate a couple of their famous bratwursts with lots of sauerkraut and mustard. After that we found the trolley back to the tie down area and sped off to Sarasota to see some friends. Note: You will have to ask me about a whistling golly.

After a 45 minute flight to Sarasota, we were met by our friends Roy and Judi. We have known Roy and Judi for a long time. They spend their summers on Lake St. Clair in Michigan and winters by the water in Palmetto, FL. They are fortunate to have boats in both places, one of which used to be ours. Last year when we visited them in Florida, we flew down to Key West for lunch. This beats flying to T82, especially if you like seafood. They came to 8T8 last year right after Thanksgiving. Anyhow, we made our way around Anna Maria Island and had more seafood and a couple of adult beverages. One convenient thing about boating, if you have to go, you can jump in the water. Can't do that when airborne.

After a couple of days basking in the sun and salt water, we launched for home. If you remember, the weather was here, wish you were beautiful. No, that's Jimmy's lyrics. Seriously,



the weather was el stinko from the Florida panhandle to the west side of Baton Rouge. We flew to Crestview, got fuel and filed to Gulfport after closely checking the weather enroute. We had an alternate of Mobile if things got really bad.

As it turned out, it really wasn't too bad at our cruising altitude of 7000 ft. It was the climbs and descents through the build ups that got interesting. Having picked my way through this stuff for several years while covering the Gulf Coast selling airplanes, I have a good feel for which way to zig or zag. On our descent into Gulfport, we had had enough zigging and zagging for one day and shut her down by 2:00 PM. We had some wind shear on the approach behind a B-737, and had our hands full, landing with almost full throttle and no flaps. We rolled into Million Air and got the last hangar space for the night. On the way to the hotel, it started raining really hard. It really sounded like hail in the hotel window. Dinning was slim that evening as the rain came down and kept up close to the hotel.

The ziggiing and zagging on the picture was during our let down and vectors for the ILS approach following the B-737.

Next day, GPT to 8T8 with a lunch stop at Galveston, was finally



June's day to fly. It was CAVU, clear all to vay up, the entire day. Smooth and not too much wind on the nose. We ran about 120 KTS ground speed all day. We borrowed the airport



car in GLS and drove up the beach to Landry's Seafood House. Absolutely the best meal we had on our entire trip.

We just used flight following on the way home from GPT. I had filed IFR flight plans, but they got lost in the AOPA FlyQ system somewhere. Total Time = 21.0 hrs.

Editors Note: Brian and June Goode are both accomplished pilots and travel the nation in their C-172RG. This is a good example of the opportunities afforded a pair of well-trained pilots in a light aircraft. You don't have to have a Citation to travel!



FLY-BABY (CONT.)

(Continued from page 1)

going on, is a technical advisor, and is one of those guys that'll roll up a sleeve and help anyone with pretty much anything. And, true to form, on a sticky cloudy afternoon, in his instantly recognizable southern Virginia (Big Stone Gap)/East Tennessee twang, he shared his aviation odyssey. Lew is a former Air Force Master Sergeant crypto maintenance tech. He retired from the Air Force in 1974 though he'd been in San Antonio off and on since 1956. During his active duty time he was an avid RC model aircraft builder/flyer and had always ogled "full scale" aircraft, but he never had the time or resources to pursue his own flying license. One day after retiring and starting a second career, though, he mentioned his latent desire to fly to a fellow modeler. Sure enough, within weeks they were taking flying lessons at Westside airport (now buried under neighborhoods) and he became an aviator.

He wanted to build, though. He looked at several designs and had decided on a plane...until he saw the brand-new Rutan designed Vari-Eze. He was smitten, and proceeded to build what he thinks was the second one in Texas. Since that time he has built 4 aircraft spanning WWI biplanes to the sleek canard Vari-eze.

His latest is a fly-baby that he completed in 2009. The Bowers Fly Baby is, by design, an all wood, cloth covered single-seat monoplane with an open cockpit. It's usually powered by a 65 or 85 HP engine that gives it cruise speeds around 70 MPH though Fly Babys have been built over the past decades with all sorts of engines and configurations. Although designed as a monoplane, there are also plans available for Fly Baby biplanes and in fact due to the Fly Baby slip-on slip-off wing design it is possible to use the same fuselage for both configurations. Like-



wise, the versatile Fly-Baby has also been modified to a tandem two seat design, and there is at least one side-by-side two seater. There are warbird look-sorta-likes, trainer look-sorta-likes, and historical plane look-sorta-likes, with round tails, teardrop features, square tails, two wings, one wing, enclosed cabins, open cockpits, and on and on. It would be hard to find another airplane design as extensively modified as a Fly-Baby

The design of the aircraft is simple. It uses straight-forward wood construction with basic joints that can be formed on a table saw. There are no complex curves or exotic angles and joints that require special cabinetry or woodworking skills.

The sides and flat surfaces are plywood similar to that used in doors, and the aircraft is primarily glued and clamped together. Wing spars are laminated or built-up wood structures. The wing ribs are all the same unless using rounded end wings in which case a couple of different ones are needed at the end. This allows the builder to stack them against a single template and cut several quickly.

Lew used a router with a cabinet edge bit. Metal parts can be ordered, scrounged or made at home for the most part. At the time the Fly-Baby was designed aircraft grade wood was plentiful and cheap, and there were lots of surplus flying wires and turnbuckles on the market. Several parts, like the fuel tank, are from a Piper Cub and are easily located. According to one website contributor,

though, nowadays wood prices are high and metal parts are less available. So, he priced the plans using totally purchased parts. Doing so drove the cost of materials for his plane up to a whopping \$6000 or so. Fly-Baby builders seem to take great pride in scrounging for lowest cost, though, and Lew is no exception.

Lew ran across an engine for sale. He didn't need an engine -

(Continued on page 6)

FLY-BABY (CONT.)

(Continued from page 5)

and certainly not a C-65 – but he made a ridiculously low-ball offer nonetheless. And, lo and behold, several months later that engine was sitting in his hangar. So, now he just had to build a plane around it.

He researched several designs to use the small engine, then happened across a photo of a pair of Fly-Babys that John Day and Bob Gauld-Galliers, in Great Britain, had rebuilt to look like a World War I Junkers CL-1 "Trench Strafer" fighters. Lew was smitten. And, the more he studied the simple, strong (cheap) construction the more he liked it.

Lew began assembling his Fly-Baby turned Junkers in 2007, and it was certified in 2010. He built it using a table saw in his hangar pretty much stock according to plans. He departed from the basic plans, though, by squaring off the tail feathers and wing-tips to give the "Junkers" look to the plane. He acquired a set of Tri-Pacer wing braces and somehow those became very beefy landing gear legs that hold a pair of golf cart sized tires.

The aircraft is covered in polyester, treated with Nitrate dope and painted with latex. Lew liked the versatility and ease of latex applied thinly with a foam brush, and the paint has held up well so far. The Fly-Baby on-line community seems high on latex finishes, and the resultant flat finish lends itself well to the faux warbirds.

Lew's plane features a single piece easily removable turtledeck that allows him to configure the aircraft several ways. With the turtledeck on, he can either put in a headrest/fairing for a modern monoplane "racer" look. Or, the headrest/fairing comes off, and his passenger gunner goes on – now he's a "Junkers". And finally, with the turtledeck all the way off he can install a "greenhouse" for a fully enclosed cockpit for those rare winter days in San Antonio. Even that has a "Junkers" look.

Lew is proud of the fact that his entire aircraft, engine and in-

struments included, cost him less than \$10,000 to build. And, he points out, his Garmin Aera makes his Fly-Baby a glass cockpit equipped model which highlights one of the nice aspects of a wooden plane. Configuration is easy. With an all wood plane it is fairly simple to make minor modifications, to add fasteners and cubbyholes in the cockpit, or even to change out the whole panel. It's plywood.

I asked Lew about his advice for a new builder looking for a first project and his response was instant. "Build a Fly-Baby". Obviously the fly-baby is intended for low-slow flights and it isn't good for trips. But as an easy, cheap, first plans-built plane there is maybe no better choice. Having built planes in wood, foam and aluminum Lew is a wood plane advocate. He pointed out that there are several guides available to help builders select and grade wood. Though it may certainly take time these days to find excellent quality wood, it is available. Lew used a lot of Douglas Fir in his plane – a little heavier than spruce, but for him it was cheaper and easier to find. And, for anyone contemplating building a Fly-Baby or wooden plane, EAA 35 has an experienced technical advisor to help them. Give Lew a call, he'd be happy to help.

Finally, as to the name..."I made it up" Lew says. And so, nose-art and all, one of the most recognizable aircraft in the chapter may be one of the least expensive, easiest to build aircraft on the field. As Lew envisioned back in the 1970's he built and piloted his own "full-scale" model using techniques he knew how to do – and did so without having to be a gazillionaire.

This is one of a monthly series of articles featuring local builders/restorers and projects of interest to the general membership. If you would like to show off your project please contact me at ea35news@gmail.com. Of course the editor reserves the right to show up unannounced at any open hangar!



The fuel sight window is visible through a hole in the panel



APRIL 2013 EAA CHAPTER 35 WORK-DAY

Photos courtesy of Nelson Amen and Doug Apsey THANK YOU!!!



HONDO ARMY AIRFIELD FLY-IN 2013

Photos courtesy of Nelson Amen, Doug Apsey Peggy Fisher and Dave (the Artist) Baker. THANK YOU!!!



I LEARNED FROM THAT!

16,000 FEET IN A CUB

Dennis Scheidt

Two friends and myself decided to buy a PA-18 Super Cub for glider towing. The PA-18 is a relatively small and light airplane with a big wing and a big engine. This all makes for a great climbing airplane with good altitude capabilities and a good glider tow plane. I love airplanes that can get away from the earth smartly. Speed does not mean much to me as I usually do not have any place to go when I fly. I just want to fly. We found a 125 HP Super Cub with only the basic instruments and no radios. The price was right so we bought it and had a glider tow hitch installed. We used it to tow our club gliders and our own private gliders. The Super Cub enabled us make excursions to places like Georgetown and Brackettville for more varied soaring conditions. It was hangared at San Marcos, TX.

We could also use the plane for our own private flying when it wasn't needed for glider towing. One day when there was no soaring, I took the Super Cub out for a high flight. I wanted to see how high it would go. It was light on fuel and I was alone in the plane. It climbed great. I saw business twins go by when I was about 7 or 9 thousand feet. Kept climbing. In short order I was up to 10,000 feet. That was the first time I had seen the thousand foot pointer on the altimeter do a full circle. There was no firm plan so I continued climbing. At around 12,000 feet it seemed odd to see jet airliners passing below the Cub on their way into San Antonio International. I kept climbing and leaning the engine. Still wanted to see how high I could get. Wondering what full rich would do, I pushed the mixture in and the engine would barely run. Leaned the engine again and kept climbing. I got up to 16,000 feet and decided that was probably high enough. The Cub was still climbing good, almost 500 feet per minute. It would have went much higher and I still have no idea how high it would have went. The engine had to be leaned quite a bit to keep it running at that altitude.

The descent took a while. At about 11,000 feet and over the airport I pulled the mixture and shut off the mags. The propeller



kept turning. I had to slow to near stall to get the propeller to stop. At about 5000 feet I decided to restart the engine. I turned on both mags and pushed in the mixture control. Then I tried diving to rotate the propeller and was surprised how fast I needed to go to turn the propeller. Guess we had good compression. I shut the engine down again, stopped the propeller, and tried starting with the starter. I barely touched the starter button and the engine was running. I let the engine warm up before using very much power. All of this was extremely interesting, especially using different methods to restart the engine.

I would like to point out that although there were FAA recommendations for the use of oxygen at altitude, there were no FAA requirements for the use of oxygen at altitude at the time of the flight. I was aware of the symptoms of oxygen deprivation and monitored myself during the flight. I was still a young man, had never smoked, and the flight was not at night. All conditions that would require less oxygen. I had been over 14,000 feet on mountain tops in Colorado without any difficulty and was active at that altitude. In the Cub, I was just sitting there with very little activity. I am also aware that some people have climbed Mount Everest without oxygen.

The above was written a few months ago and this would have been the end of the story but recently I came across an article in the February 2013 issue of Flying Magazine about a Cessna 150 flight to 18,300 feet. The service ceiling for the 150 is listed as 14,000 feet according to the internet, but remember those published figures are for gross weight and the C-150 in question was lighter than gross with only one aboard and probably no baggage. The article was written by Ken Fransen who made the flight. I wanted to compare that flight to my own high flight.

There were some similarities between our flights. We both flew small light airplanes although I had a 25 horsepower advantage and less than full fuel. We both saw airliners pass by while up high, and neither of us had supplemental oxygen. The weather for both flights was good.

(Continued on page 11)

YOUR HEALTH

TOO HIGH

Chuck Fisher

In this newsletter Dennis Schiedt discusses flying a Cub to 16,000 feet “back in the day” and references a Flying Magazine article describing a Cessna 150 exceeding 18,000 feet. They both reflect a time-honored desire to go higher and higher that harkens to the very first flights ... and that has claimed a lot of pilot lives. Today’s aircraft can fly higher than humans can tolerate – and with autopilots and trim the planes are perfectly happy to keep flying and keep climbing with no input from the unconscious pilot. In 1999 the nation watched helplessly as Payne Stewart and his aircrew succumbed to hypoxia en route to Dallas but continued to fly for hours on autopilot until their aircraft finally ran out of fuel and crashed. These were professional pilots. Altitude kills.

Oxygen diffuses into the bloodstream because of the pressure of the greater number of oxygen molecules in the lungs compared to the fewer number in the bloodstream. Although the percentage of oxygen remains the same at all altitudes (around 21%), at 18,000 feet the pressure is ½ that at sea-level. Thus, there are half as many oxygen molecules available to be absorbed in each breath. Humans really don’t have to be very high to start sharply reducing their blood oxygen levels. Piston pilots deal with reduced oxygen in daily ops as they lean the engine to compensate for the reduced amount of oxygen available for combustion. However, few, I suspect, realize that any time they have to lean the engine it also means there is less that much less oxygen available for the pilot as well.

Lack of oxygen in the tissues is called “Hypoxia”. The brain is one of the body’s biggest consumers of oxygen, thus it is usually affected by low oxygen before other parts of the body. Unfortunately, our bodies, not designed to fly, have no built in warning for insufficient brain oxygen. As a matter of fact, as the brain dies people often get a sense of euphoria, peace or relaxation. Although probably a good adaptive mechanism on the ground, this phenomenon is deadly in the air.

As oxygen levels in the bloodstream decrease, parts of the brain that use the most oxygen start to throttle back. Some of the first to slow down are the vision receptors (especially color vision receptors) in the eyes. At altitudes as low as 6,000 feet some folks begin to experience reduced night vision, and at altitudes above 10,000

feet night vision will almost certainly be affected. The change is subtle, and to most imperceptible. But when oxygen is applied and the world all the sudden becomes “bright” again. So with low oxygen at even modest altitudes dark nights become even darker and features harder to discern. Everything will appear grey/black and flat. Sound problematic?

Above 10,000 feet many people, especially smokers and those unaccustomed to altitude, will experience slowing of thought processes, maybe having to repeat radio calls or having trouble doing calculations in their heads. Just a little higher and the brain will start to

become oxygen-starved and will begin to conserve energy. It’ll shut down high energy processes, like calculation and decision making, and begin to enter a near-sleep state. The pilot will feel great, relaxed and confident, not a concern in the world ... and some keep climbing figuring they must be just fine.....



<http://www.mypilotstore.com/myilotstore/sep/7792>

<http://www.mountainside-medical.com/products/Nasal-Cannula.html>

Supplemental oxygen increases the number of molecules of oxygen available to be absorbed in the lungs. At lower altitudes, like those most GA pilots fly, oxygen delivered by a nasal cannula (a tube that blows

oxygen in the nose) is usually sufficient. At higher altitudes, a mask worn over the nose and mouth will keep oxygen from escaping into the atmosphere and deliver more to the lungs. And, at very high altitudes, higher than most GA planes fly, oxygen delivered at 100% and under pressure is required to push enough molecules into the bloodstream.

The FAR’s require supplemental oxygen if the pilot is flying more than 30 minutes above 12,500 feet and at all times above 14,000 feet. The FAA encourages oxygen use above 10,000 feet and at night above 6,000 feet, though, because of the subtle vision and performance decrements even at those lower altitudes.

Hypoxia is such a subtle killer that military aviators undergo recurrent training in altitude chambers to learn how their body uniquely responds to hypoxia. At very high altitudes, there may be only a few seconds between hypoxia and unconsciousness, so early recognition is key. Some folks feel happy or calm, some get tingling in their fingers, and some get downright punch-drunk and can’t stop giggling. The brain’s response is person-specific but none are unpleasant and almost all can be totally unrecognized.

(Continued on page 11)

I LEARNED FROM THAT (CONT)

(Continued from page 9)

There were some differences in our flights too. Ken went higher than I did and I guess that makes him the winner. Ken said he suffered from hypoxia, was confused about his location while up high, was confused reading the altimeter, and had difficulty writing. Ken took a photo of his panel to prove his altitude to his buddies and when looking at the photo days later he discovered that his hand in the photo was blue. I knew my location and altitude at all times and never had any trouble reading the instruments. Watching my hands and fingernails was one of the things I used to monitor my condition and to insure I had sufficient oxygen at all times. I had none of the other symptoms he quoted in the magazine article. Was shutting the engine down an irrational thing to do? I don't think so. I waited till I was at a much lower altitude and over the home airport to shut the engine down. I had planned to do the engine shutdown for some time and having a lot of altitude on hand and being over the airport, it seemed like a good time to do it.

Ken also admitted that he had violated Positive Controlled Airspace by 300 feet. Maybe! Positive Controlled Airspace is now called Class A airspace and is above 18,000 feet. I feel sure that Ken set his altimeter to either field elevation or the reported altimeter setting before flight. However there are several things that could make an altimeter at least 300 off, especially at 18,000 feet. Back at that time before widespread use of altitude encoding transponders, I feel sure the altimeter had probably not been tested or calibrated since the aircraft left the Cessna factory.

I could not and would not do the same thing now because of regulations and I am not sure how my much older body would tolerate the reduced oxygen levels. I do believe that both Ken and myself will remember our experience up high for the rest of our lives. We may even be glad for the experience, I know that I am

Editors Note: Test pilots get paid big bucks. Although most home-builders will become test-pilots at some point, the editor does not recommend high altitude flight without preparation be part of the test profile. See the accompanying article.



Did you know?

Unusable fuel is fuel that under normal flight conditions is not available for operation of the engine. The weight of "unusable fuel" is included in the "empty weight" of the aircraft, so when you are figuring your weight and balance, only add in the **usable** fuel. FAR 23.959

YOUR HEALTH (CONT)

(Continued from page 10)

GA pilots can do the same training – as well as lots of other useful training like survival skills training – totally FREE. OK cheapskate pilots I said it – FREE. Your tax dollars have built a very nice training facility in Oklahoma City that you are part owner of. There you learn about hypoxia, test your symptoms; learn about oxygen equipment and more. If you have never done this type of training, I'd encourage you to gather up a few buddies and plan a field trip to OK City. Call 'em at (405) 954-4837 to schedule a time. It's really that simple.

If you are contemplating a high altitude flight this summer (like across the Rockies) I'd encourage you to do this training. If you are contemplating seeing how high your experimental will go – don't. IT will go higher than you will – I can pretty well guarantee.



NAME THE PLANE

Doug Apsey

This month's mystery plane is courtesy of EAA Chapter 35 member Brian Goode. Brian spotted this while up in Alaska a few weeks back.



So, who will be the first to tell me:

What company built it?

What is its designation? i.e. C-172, PA-24, etc.

What role was it built to fulfill?

What airplane is it based on?

Within 5 years, what year did it first fly?

THE BUILDER'S CORNER

BEARINGS

Mark Julicher

EAA 35 Technical Advisor

I know you have heard this before, but it is worth repeating. In aircraft dollars, oil is cheap, bearings are a bit more expensive, and crankshafts are gold. If you are too cheap to change your oil on a routine basis, you will eventually destroy your bearings and finally that expensive crankshaft will be junk.

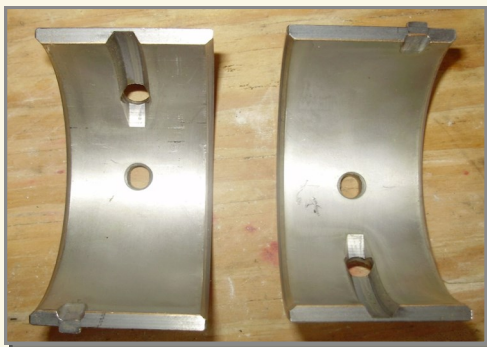
So how exactly does that work? Lets break down the physics of bearing failure and then see a couple examples.

When gasoline burns, the primary combustion product is water. Water mixed with oil is acidic. Acid on metal causes corrosion... Need I say more? You know where this is going.

When gasoline burns, another major combustion product is carbon. Carbon is hard. Little flecks of carbon are abrasive. Abrasives on metal... OK you see where that line of reasoning is going also.

A modern bearing is built from several layers of metal. The outermost layer is a tin alloy known as babbitt. A middle layer is of bronze alloy and the bearing shell is steel. Oiled babbitt is very slippery and is desirable because it does not gall. The thin layer of babbitt is capable of standing up to crankshaft loads for many hours if it is cared for properly. "Cared for properly" means mind your oil temperature and keep your oil clean – simple.

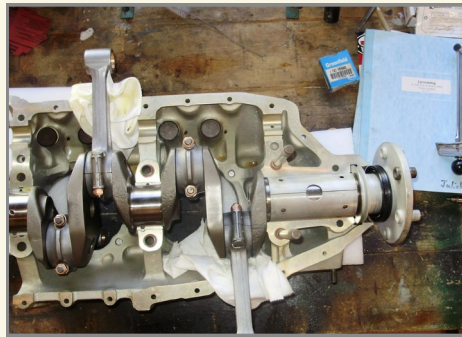
This first photo is a new main bearing from a Lycoming O-320. It has a few light scratches on it, but is it perfectly serviceable. During operation, oil under pressure flows out of holes in the hollow



New Bearing, Lycoming O-320

crankshaft, through the holes in the bearing, and lubricates the babbitt surface. The crankshaft, therefore, rides on a thin film of oil. As oil circulates in the engine, oil for the bearing is constantly replaced with fresh, warm oil. If you run an engine with-

out oil pressure, the bearing has a life expectancy of mere minutes.



Lycoming O-320 being assembled.

The next photo shows a Lycoming O-320 during assembly. The crankshaft is resting on the lower aft and lower center main bearing halves and the complete nose bearing is wrapped around the front of the crankshaft. The

connecting rods are in place and yes, there are bearings installed in the con-rods also.

Now as the bearing wears out, the small gap between the bearing and the crankshaft journal gets larger. The oil film must be thicker to do its job. Up to a point, the oil pump provides enough pressure to keep sufficient oil film between crankshaft and bearing, but eventually the wear becomes so great that the crankshaft journal begins to wobble inside the bearing and oil film will not prevent metal on metal scuffing. Indications should be obvious to the pilot or mechanic. When the oil pressure can't be maintained at service manual numbers, you can suspect that the bearings are wearing out, (although other problems can cause low oil pressure.)



Worn Out Center Main Bearing of Lycoming O-320

If you continue to run an engine with poor bearing lubrication, the bearing may seize, gall, disintegrate, or all of the above. If you experience a pounding sound, especially at low RPM, bearing failure may be the cause.

The second photo shows a center main bearing that has failed. The engine from which this bearing was removed could

(Continued on page 13)

BUILDERS CORNER

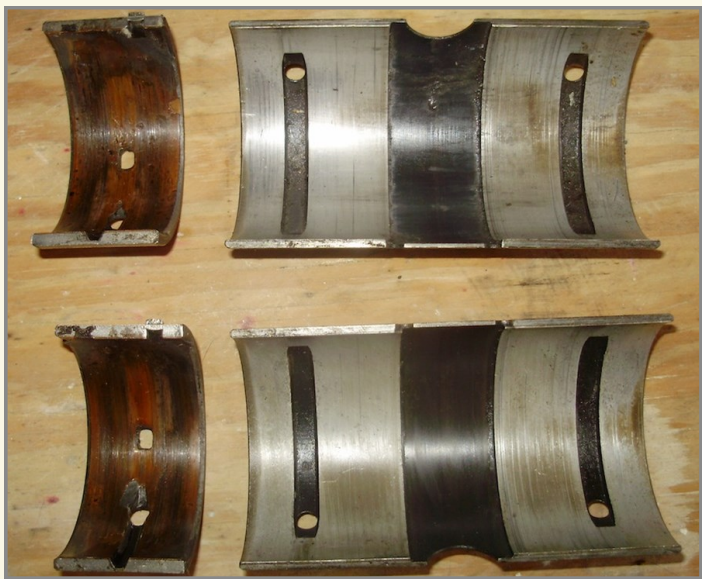
MAY MYSTERY PLANE REVEALED

Doug Apsey

If you thought last month's mystery plane might be a Great Lakes, that was a good guess but that is not it. The May mystery plane is the Marquart MA-5 Charger developed by Ed Marquart. The first Charger flew in October of 1970.

(Continued from page 12)

be started, but oil pressure showed low. Furthermore, the oil in the engine was old and filthy. Note that there is no babbitt left on the bearing. The bearing is worn through the babbitt and now bronze is the bearing surface. The bronze is scored and



Center main bearing and nose bearing of Lycoming O-320.

chunks are missing. The evidence suggests both mechanical erosion and chemical etching were taking place. Furthermore, the \$3000 crankshaft riding in this bearing had become a door-stop.

The final photo shows the same center main bearing and also the nose bearing from the engine. The photo suggests that the greater surface of the nose bearing lessened the deterioration of the bearing or perhaps that there is greater wear on center main bearings than on nose bearings. None-the-less, the nose bearing is worn out also and bronze is starting to show through the babbitt.

I hope you are now inspired to keep your oil changed.

Mark Julicher is an EAA technical advisor and frequent contributor to this newsletter for which the editor is immensely grateful. He can usually be found at Bulverde Airpark and would love to help you with your technical issues. His contact information is in the back of this Newsletter.



The MA-5 is a plans built design with tube and fabric fuselage and fabric covered wood wings. Both the upper and lower wings have a wingspan of 24 feet with the upper wing swept back while the lower is straight. Target gross weight is around 1600 lbs. Vari-

ous engines have been used to power the Charger with a range of 125 to 200 hp recommended. The cruise speed is around 115 mph and it has a stall speed of about 48 mph. The little biplane was designed with sport flying in mind and although it is capable of some aerobatics it is not intended for the competitive category.



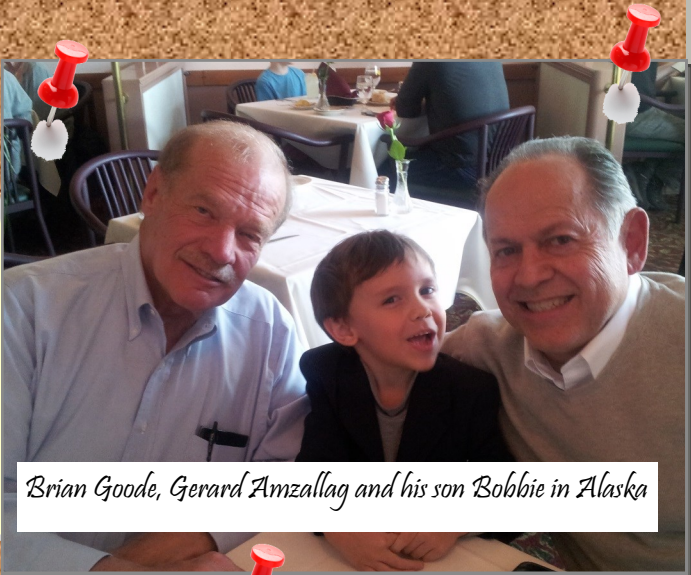
Marquart Chargers have won in the Grand Champion Plans-built Aircraft category three times at EAA Airventure. The latest to win that honor was Mark Gilmore's Marquart Charger in 2009. For more pictures of Mark's stunning Charger, check out the following link. <http://www.eaa.org/apps/galleries/gallery.aspx?ID=247>

ID=247

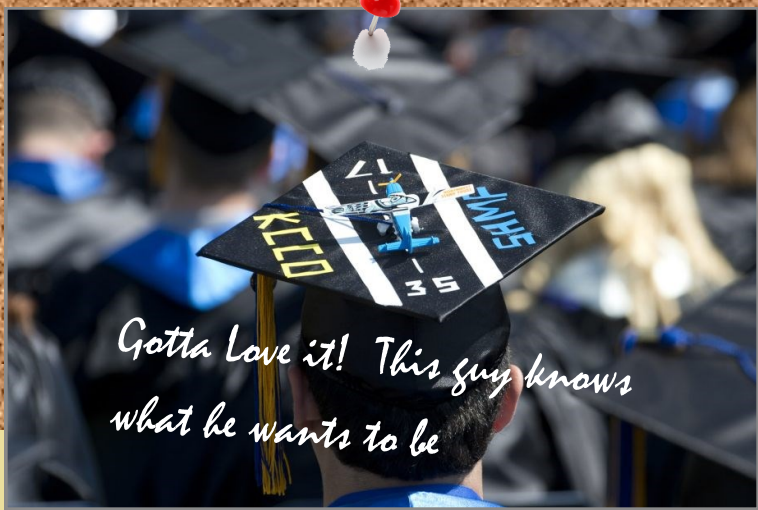


CHAPTER BULLETIN BOARD

Thanks to All EAA workday
VOLUNTEERS!!!!!!!!!!!!
 This Month for our Picnic June 8th we'll cook up
 Hamburgers and Hot dogs
 Cooks and volunteers are needed
 Share your Summer side dishes.
 We'll gather around 1130 and serving times
 will be from noon until 1:30
 Have a safe and Happy Memorial Day and
 Summer.
 Gail Schiedt



Brian Goode, Gerard Amzallag and his son Bobbie in Alaska



Gotta Love it! This guy knows what he wants to be

YOUR Articles Needed

Chuck Fisher

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



Country Store

Brian Goode



There are still some Chapter 35 Tervis Tumblers available for sale through the Country Store. The embedded logo is a embroidered patch between the insulated layers of the tumbler, not a stick on label.

They can be purchased at any of the Chapter 35 functions or by stopping by Hangar 53 at San Geronimo Airpark when you are out visiting your aircraft. The price

remains at \$16.00 each and are packaged in quantities of four. Give Brian Goode a call at 727-709-1159 and reserves some today.

The Chapter is excited to introduce a new locally designed and produced (Yup Made in Texas, USA—Really!) product to tell you about, the Aero- Camper Chocks. These wheel chocks are lightweight, portable and durable. Designed for use on grass or dirt parking areas, they work equally well on pavement or tarmac.

These units are precision water-jet cut from 6061 aluminum extrusion, hand finished and powder coated. Chocks are 2-1/2" X 5" long. At only 7.5 oz. for a pair of chocks, they provide secure chocking without sacrificing useful load or space.



These wheel chocks are available for a \$21.00 / pair donation to the Chapter. Most people are getting two sets, one for each main wheel. They will soon be on display at all Chapter 35 functions, or you may call the Country Store at (727)-709-1159 to reserve a couple sets.

EAA CHAPTER 35 CATALOGUE

Caps:

Cloth Chapter 35 and EAA Notional caps	\$10
Mesh Chapter 35 logo caps	\$5
SWRFI caps (collector's item)	\$8
Denim Shirts: Only 2 Large Short sleeve left	\$20
Tervis Tumblers	\$16
Chapter 35 cloth logo patches (sew on)	\$3
Bumper stickers	\$2
Chapter 35 logo stick-on stickers (Per inch)	\$2



2012 EAA Chapter 35 Contacts List



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Board Advisor 830-438-9799	John Killian jmkilliani@gmail.com		

The FINE PRINT: Please note that, as always, in the past, present, or future, any communication issued by the Experimental Aircraft Association Chapter 35, regardless of form, format, and/or media used, which includes, but is not limited to this newsletter and audio/video recordings, any digital formats including any EAA Chapter 35 website, is presented solely for the purpose of providing a clearinghouse of ideas, opinions, and personal accounts. Anyone using the aforementioned does so at their own risk. Therefore, no responsibility or liability is expressed or implied and you are without recourse to anyone. Any event announced and/or listed herein is done as a matter of information only and does not constitute approval, control, involvement, sponsorship or direction or any event local or otherwise.

CHAPTER CALENDAR

JUNE	8	ANNUAL CHAPTER 35 PICNIC <u>Chef, Prep Cooks, Servers Needed</u>	EAA Chapter 35 Clubhouse 11:30 am to?
JULY	13	 FLY-IN BREAKFAST EVENT <u>Chef, Prep Cooks, Servers Needed</u> BOD Meeting	EAA Chapter 35 Clubhouse 8:00-10:00 am 10:30 am
AUGUST	10	<u>DAYTIME MEETING</u> Speaker: Dave Baker “Demonstration of steps to cut open and inspect an oil filter”	EAA Chapter 35 Clubhouse Lunch 11:30 am Meeting/Program 12:30 pm
SEPTEMBER	14	<u>DAYTIME MEETING</u> Speaker TBD	EAA Chapter 35 Clubhouse Lunch 11:30 am Meeting/Program 12:30 pm
OCTOBER	12	<u>DAYTIME MEETING</u> Speaker TBD	EAA Chapter 35 Clubhouse Lunch 11:30 am Meeting/Program 12:30 pm
NOVEMBER	9	ANNUAL CHILI COOKOFF Annual Membership Meeting David Larson “Idaho Backcountry Flying.”	EAA Chapter 35 Clubhouse Lunch 11:30 am Meeting 12:30 pm
DECEMBER	14	 EAA 35 Holiday Dinner!	EAA Chapter 35 Clubhouse Social Hour 12:00 pm Lunch 12:30 pm Gift Exchange 1:30 to 3:00 pm

Upcoming Events (200 mi of 8T8)

Aviation Calendar of Events websites

Aero Vents <http://AeroVents.com>

EAA <http://www.eaa.org/calendar>

Fly-ins <http://www.flyins.com>

Saturday, July 13, 2013

9:00 a.m. - 12:00 p.m.

Young Eagles Rally

Del Rio International Airport, Del Rio, TX, USA

Come join EAA Chapter 1493 in support of the Young Eagles Rally. Couldn't be a better reason to Fly-In to DRT.

06/01/2013

Pancake Breakfast (Fly-In) 0800

KPWG McGregor Executive Airport - Waco, TX

Distance: 141.2nm

29 July—4 Aug—Airventure (Oshkosh)

06/08/2013

Pancake Breakfast Fly-In (Young Eagle Rally)

New Braunfels - New Braunfels, TX

06/15/2013

BBQ Fly-In (Fly-In)

Jasper County Airport - Jasper, TX

06/29/2013

Skye FBO Fly-In (Fly-In) 0900-1400

T P McCampbell Airport - Ingleside, TX

Distance: 127.3nm

WANTED AND FOR SALE

FOR SALE: Complete RV-8 Quick Build Kit with O/H Lycoming IO-360 engine (minus starter/mags/prop) - \$50K Contact: RB "Doc" Hecker at www.assenddragonaviation.com or tcflyingdoc@yahoo.com

FOR SALE: Early RV-3 kit. Tail; feathers, flaps and ailerons finished and primed. Wings are finished but are the old version and only useable for parts. Have cowling, windshield structure, gear parts, wheel pants, engine mount, etc. All sheet metal and formed bulkheads for fuselage. Zero time Lycoming O-320-E3D engine with all new parts. Include engine log book and builder's log. Health forces sale. Tom Gould 830-663-4448 or nazca9t@hughes.net

FOR SALE: Stolp Starduster Too SA 300. Eng. Lyc O320 (160 hp), newly rebuilt, constant Speed Hartzell Prop, 30 gal fuel tank, new Ceconite fuselage cover, full flying surfaces rejuvenated. **MUST SELL-Make Offer.** Call Dan Cerna at (210) 688-9345.



FOR SALE: Subaru EJ-22 engine, Ser. # 589390. Includes single 4-barrel carburetor, Mallory ignition, planetary reduction drive. Proven system, removed from flying aircraft. \$3100 Chuck @ 979 218 6153

FOR SALE: Hegar brake master cylinder. 7" single control, Bore size - 5/8" (0.625). Includes brake bleeding kit, misc. fittings. \$95 Chuck @ 979 218 6153

FOR SALE: Main wheels for UL or light experimental. One pair Matco Model MH6B wheels, with brake calipers, new brake pads, new wheel bearings, new Air Trac 15X6.00X6 4-ply tires. \$295 Chuck @ 979 218 6153

FOR SALE: One unused Air Trac 15X6.00X6 4-ply tire. \$40 Chuck @ 979 218 6153

FOR SALE: Garmin GPS 195 with all original accessories. Outdated, but simple and fully functional, good for navigational assistance in VFR conditions. \$100 Chuck @ 979 218 6153

FOR SALE. All items were functioning normally prior to being removed as part of the panel upgrade on my RV-6A.

- Apollo GX-60 GPS/Com, Apollo ACU (annunciator), and Jeppesen Skybound The GX60 is TSO-C129a Class A1 approved for IFR non-precision approach operation. The com function supports monitoring the stand-by frequency. I'll also include a Trans-cal model SSD120 altitude encoder (passed IFR check (3/12)). - \$2500.

- Vertical Speed Indicator - United model 7030, 0-3000 fpm, \$100
- Altimeter - United part no 5934PD-3, Lighted (passed IFR check 3/12), \$150
- Airspeed Indicator - United part no 8125, \$100

Pictures available on request. Contact Dick Flunker, email RFlunker@ATT.net, or call 214-793-5546.

HANGAR SPACE FOR RENT (8T8): Several new hangars will soon be available for rent. If you are interested in renting a brand new 40 foot wide by



32 foot deep hangar, please contact one of the following EAA Chapter members (listed in alphabetical order): Brian Goode, Richard Gramling, Joe Killough, Lew Mason or Ron O'Dea. Their phone numbers are listed in the new EAA Chapter 35 Directory. There might be others for rent, but we don't know about them. The hangars have concrete floors and will have electric and water service run to them.

HANGAR SPACE FOR RENT (8T8): I will have a t-hangar (30A) available 6-1-2013 Contact. Doc Hecker. 210-391-1072.

FOR SALE: Hangar at Boerne Stage Airfield, 5C1. 30' x 40', elevated office and storage, shop, storeroom, and, toilet. Airport fee \$540 per year, includes water, trash disposal and runway access. See at HangarHunter.com Contact Bill Bartlett 210-865-4591 Email: bartlettsat@gmail.com



WANTED: O-200 case and crank. Other parts or a complete engine would be considered. Run out engine is OK. Contact Mark Julicher at 210-382-0840 or mjulicher@earthlink.net

EDITORS NOTE: PLEASE Notify me when your item sells!!

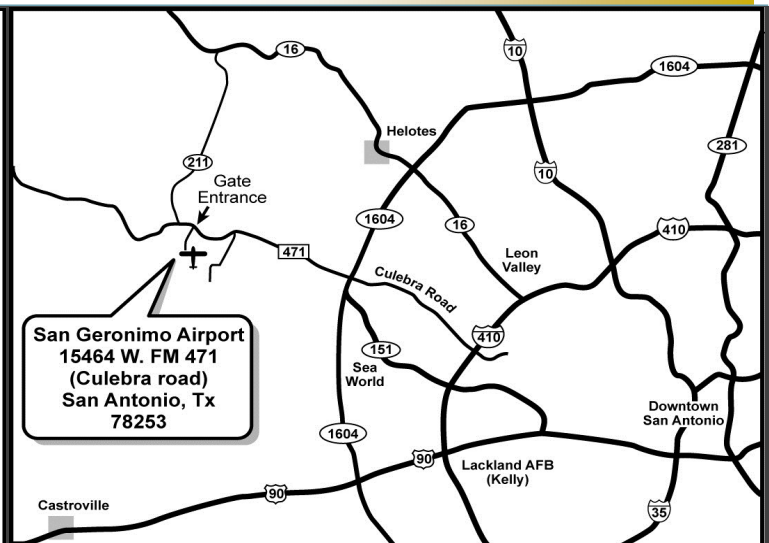
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Ron O'Dea, Membership Chairman
15464 FM 471 W., #14
San Antonio, TX 78253

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

**Chapter 35 meets
Each Second Saturday of the Month**

**June 8th
Annual Chapter Picnic
11:30
Chapter 35 Clubhouse at 8T8**



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!

Runway 35 OFFICIAL NEWSLETTER OF EAA CHAPTER 35 – SAN ANTONIO, TEXAS

www.35.eaachapter.org