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RUNWAY 35

The Official Newsletter of EAA Chapter 35, San Antonio TX



December 2014

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Next Event

13 December 2014

EAA Chapter 35 Holiday Luncheon

Social Hour 11:00 pm

Lunch 12:00 pm

Gift Exchange to follow

Chapter 35 Clubhouse

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Semper Paratus

From the Editor: No this is not about Christmas, but for one boat captain this pilot delivered a heck of a gift!

Severo Garza

It's 2:00 AM and I am sleeping soundly in my bunk room at the Coast Guard Air Station. I am suddenly awakened by this "excruciating" sound: WHAAAAAAAA.....

WHAAAAAAAA.....WHAAAAAAAA. It's the Search and Rescue (SAR) alarm announcing an emergency rescue mission. I throw the cover off and roll out of bed thinking: GHEEEZ, I am getting too old for this stuff...WHAT IS THIS ALL ABOUT? I am glad this is my last mission!

I have been in the Coast Guard for six years and am in my early thirties. It has been a wonderful experience being a pilot and performing SAR missions in the Gulf of Mexico...but it is time to move on to a different job and some quality time with

my little kids. I separate from the Coast Guard in a few days and this is definitely...

my last mid-night SAR mission.

There is a Coast Guard crew that is "Always Ready" (Semper Paratis) for service...24-7 as they say nowadays. We can be airborne in

about 20 minutes...welllllll maybe a few minutes more when the old pilot has to roll out of bed at 2:00AM.

It's 2:05 AM and I am already in my flight suit with boots on, washing my face and brushing my teeth. I kept the flight suit hanging next to my bed and my boots at the side. It's an easy thing to get into the suit: two legs and a long zipper from the crotch to the chest and throw each arm into the survival vest packed with flight gear. Boots are also easy; they are laced about half way up and then hooks instead

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http://farm4.static.flickr.com/3886/15178294500_d48d80ed86_m.jpg

Sign up now for the

EAA 35 Holiday Luncheon

See Page 2 for Details



PRESIDENTS COCKPIT

[For Swedish Click Here](#)

To all members of EAA Chapter 35 in San Antonio,

The winter is coming. We may not have 8-9 feet of snow, as they recently had in Buffalo, and we don't have to clean our runway at San Geronimo Airpark with a snowplow or a snow-blower. Just wait until the sun is coming up and the 1 mm (whatever that can be in fractions of a US inch) snow will melt within a couple of hours. But we may have to use the airplane heater (if you have one in your airplane), and then we may have an increased risk of carbon monoxide inhalation, if the engine exhaust gas leaks into the cabin. Carbon monoxide (CO) intoxication is very dangerous. You can't see or smell this gas. You may not experience any symptoms initially, but slowly and without you realizing it, very light symptoms of fatigue and headache may develop, and you may have a reduced reaction time, confusion and deteriorating performance, which can lead to mistakes and loss of your flying skill. Even worse, if too much inhalation of this gas, it may lead to unconsciousness and it can be fatal. A simple method to measure a carbon monoxide leak, can be the use of a carbon monoxide detector. There are several options, but a cheap one I just bought on the Pilot Shoppe store close to the San Antonio International Airport, was a CO-detector (Aviation Supplies & Academics, Inc.). It is about a millimeter (0.03937007874 US inch) thick, that you can stick on a panel in your aircraft. It costs \$6 + tax and should be replaced about 12 months after opening it. It turns grey or black, when CO is present. However, no audible signal or blinking red light.

AOPA's and EAA's activities to try to stop the requirements for Medical Certificate 3 for private pilots with up to 5 passengers in aircraft up to 6000 lbs. are continuing with discussions between government agencies and new support from legislative and medical communities. "The medical certification reform proposed by EAA and AOPA would include pilot education on the incapacitating effects of medications - something that is not part of today's third-class medical certification process", is reported in EAA's Sport Aviation Magazine. No decisions are made so far.

As I mentioned in my earlier President's Cockpit, FAA just approved the Additional Pilot Program, which allows homebuilders to use a second, qualified test pilot to fly during the test flights of the aircraft. I just realized that the word qualified test pilot means that the second test pilot has to have more qualifications than the first test pilot. The first test pilot needs to have a pilot certificate with a current biannual flight review and a medical certificate (if private pilot license or higher) and 3 takes-off and landings within 90 days. The second test pilot, however, also needs 10 takes-off and landings within 90 days, a total of 500 flight hours, 40 flying hours within 12 months, and flight experience in the model or family of the tested airplane and 10 landings in the subject aircraft (tricycle) or 20 if tail-wheel. I had hoped to be the second test pilot in our soon completed Zenith STOL CH701. However, unless I fly 20 more hours and get some experience and 10 landings in another STOL CH701 (more than the demo flights at Zenith Aircraft Company I had 9 years ago), I, unfortunately, don't have sufficient qualifications, even with about 1285 flight hours.

EAA35 has gotten a preliminary invitation from the Stinson Airport 100-year anniversary celebration committee to participate with airplanes and a Young Eagles Rally sometimes in April/May. We just had to change the last YE Rally from San Geronimo to Stinson due to

bad weather and soft taxiways and grass area. Under the excellent leadership of Phil Vaneau, we had 12 flights with in 5 different aircraft with 23 young boys and girls between 8 and 17 years. Everything worked smooth and nice and it was a fine rehearsal, if we decide to participate in this unique celebration of the second oldest continuously operating general aviation airfield in US.

The next EAA35 event will be the Christmas Party on December 13 at 12 pm -about 3 pm. I am pretty sure, that it will be fun. However, you need to buy the tickets for the Christmas Party in advance for planning purposes.

Everyone is very welcome to participate in this final EAA 35 event during 2014.

Ulf Balldin

Sign up NOW for the Holiday Luncheon! We have 50 seats and there are a few seats still available.

- ◇ Dec.13
- ◇ Christmas gathering 11-12
- ◇ lunch 12-1 Grady's Beef and turkey 3 sides.
- ◇ Gift Exchange—always a riot—to follow. ~\$10 target for gifts but that's up to you!
- ◇ \$15 per person

Although tickets might be available a the door, please make a reservation for you and yours through Dee Brame at 210-493-5512 or DeeB@satx.rr.com.

Members News

It is time to renew! Thank you to all who have sent in there renewal for 2015 Membership. We have gotten a very good response so far. Thirty members have renewed already! If we keep this up, we should everyone renewed by the end of December. If we can do that I will publish a new Membership Directory for everyone.

This year the dues remain....the same!

Your nominal dues go to: maintaining the finest chapter buildings and hangar facilities you'll find in EAA, sending a worthy candidate to the Air Academy—possibly launching a life-long love or career in aviation, subsidizing meals and activities, publishing an awesome newsletter and building an emergency fund to ensure our youngest members can carry on the tradition for decades to come. That's a pretty good deal for a few bucks a year!

FALL 2014 YOUNG EAGLES

Phil Vaneau

In a previous career we had a saying..."flexibility is the key to superior airpower." Flexibility was what our chapter displayed in successfully accomplishing our Young Eagles Rally on Sunday at Stinson Municipal. Five pilots and 12 ground volunteers accomplished 12 flights giving 24 youngsters their first flight in a small aircraft and hopefully introducing them to a lifetime in aviation. We had more kids pre-register but lost some when we had to change the date due to weather. We were, however, able to gain a few through word of mouth. Some of the initial kid comments included..."I want to fly in the yellow airplane (Ron O'Dea)," "I want to fly in the red airplane (Doug Jenkins)," "I want to fly please, please." Afterwards there were many "That was awesome!"

One of the major factors which helped our success was the support from Stinson. The Airport Manager, Morris Martin, gave us full use of the Terminal area, briefing room, ramp, and supplied some equipment. The Chief Controller, Robert Arredondo, greased the skids for a very smooth flight operation which involved Class C & D airspace and Sunday morning transients. The Tower Controllers complimented us afterwards for a professional operation. One of them wants his kids to fly with us next time. Sandra from the "Throttle Back Grill" opened up to

serve breakfast and lunch...Great breakfast tacos, burgers and sandwiches!

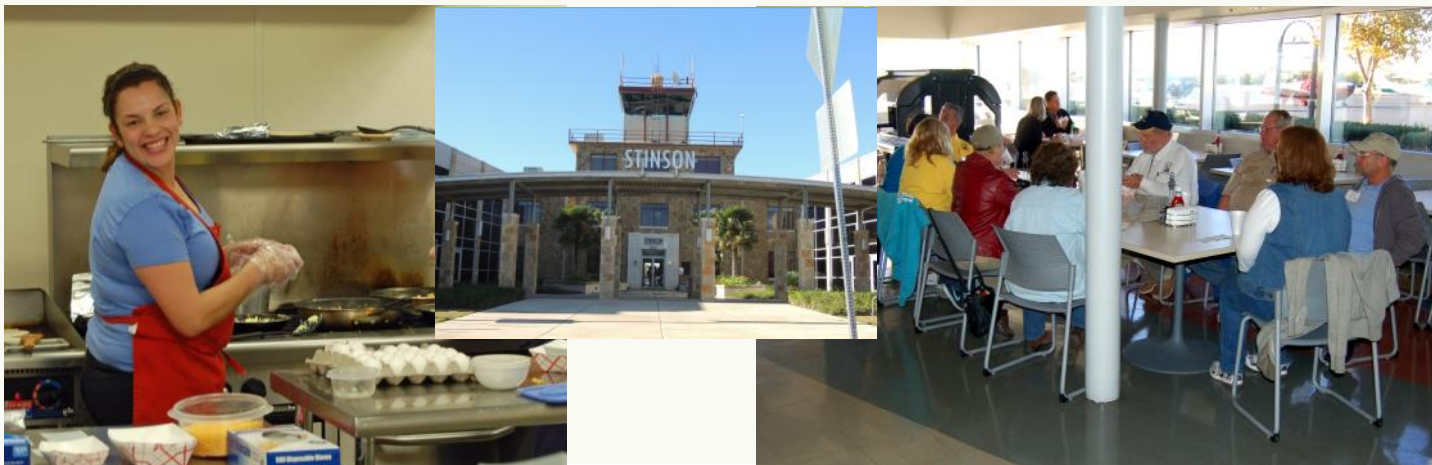
A smooth and safe Young Eagles Rally consisting of lots of hyper and excited kids, cautious and questioning parents just doesn't happen thru luck. It took the patience, flexibility, and hard work of our volunteers. Our team included: Kay Morgan & Susan Vaneau as Greeters and Admin, our illustrious leader Ulf Balldin and Jim Gibson as Flight Coordinators, Chuck and Peggy Fisher as Static display briefers, Jeff Remdodt as Safety overseer; BJ O'Dea, June Good, Randy & Lety Stout, & Ron Paduh as Escorts (kid herders). Professional Young Eagle Pilots included: Brian Goode, Ron O'Dea, Doug Jenkins, Mike McCoy, and Phil Vaneau. Mother Nature was also kind to us giving us Blue Skies and delaying the winds until the Rally was done.

To all our Chapter 35 members...Thanks for talking up the Young Eagle Program to the organizations you are affiliated with (Boy/Girl Scouts, Church, Jr ROTC, Schools) and friends. This is how we have and will find those 8-17 year olds to introduce the wonderful world of aviation. A special thanks also to those pilots that have flown 10 Young Eagles this year. The \$5/flyer that we will get from EAA will help send a worthy youngster to EAA Air Academy. Blue Skies!



Fun Place to Fly—Throttle Back Grill at Stinson Field

Phil mentions the great folks at the Throttle-Back Grill in his article above. I'd like to echo his comments and add mine. Airport Diners are vanishing, and the only way to ensure we have great places to go and to take our friends...is to go there. The Throttle Back Grill is a brand new establishment at Stinson Airport. They have a wide selection of food reasonably priced. A true, no kidding family business, they came in just for us—Chapter 35—on a Sunday morning and cooked up superb, fresh breakfast and lunch in their all-windows café where we could see the entire airfield. Stinson, the second oldest continuously operating airport in the US is a relaxed easy to use airfield. They have a tower and controllers that are General Aviation oriented. I'd encourage you to finish off a few flights with the short hop over to Stinson and visit the nice folks at the Throttle Back Grill!



Young Eagles—Fall 2014—KSSF



Young Eagles—Fall 2014—KSSF



NOVEMBER 2014 MEETING AND CHILI COOK-OFF



NOVEMBER 2014 MEETING AND CHILI COOK-OFF



GOODE (CONTINUED)

(Continued from page 1)

of grommets for the upper portion of the boot. I look down at my boot laces and see my "dog tag" laced into the boot. When I was in Navy Flight School I asked: why do we lace our dog tag into the boot? The answer: The foot inside the boot is usually the only portion of the body that is recognizable after a fiery aircraft crash. Therefore, by lacing the ID tag to the boot, it facilitates the confirmation and identification of the casualty; it's a tradition that comes from WWII. So I noticed the dog tag around my neck and the one neatly laced into my boot. I wondered how life would be in the coming months and years without dog tags...I have gotten so used to the tinkle-tinkle of the metal on my chest and the tucking away of the tag into the laces of my boot.



http://northcoastphotos.com/sites/northcoastphotos.com/previous_site/USCGPhot/HU25FalconStraightLevel.jpg

It's 2:10 and I enter the SAR control center. There is a lot of commotion with radios blaring, charts being plotted, and people scurrying everywhere. We don't really have much time, I get the minimum information about the case and it's reported position...I can get the rest via the radio en-route to the scene. It's a shrimp boat taking on water (sinking) about 200 miles to the southeast. The weather is stormy since a cold front blew in earlier that evening. I nonchalantly take the stairs down to the hanger floor and meet the other pilot. He is senior to me so I am "technically" the Co-pilot. As we stand at the edge of the hanger and observe the airplane being prepped for service... we discuss the weather. We watch the thunderstorm with it's sheets of rain peppering the hanger roof and cascading along the tarmac as the wind carries it in rhythmic waves. The wind is from the north and the storm is moving southward. It should be clear of the field by the time we takeoff but will be in our flight path as we depart towards the scene. The commander turns to me and says: "you want to fly the left seat since this is your last mission?" I said: "sure...why not"; I was elated!!!! We throw our leather jackets over our heads and calmly trudge towards the plane and do a quick walk-around of the aircraft; we never run.... Coasties are the coolest pilots!!!!

It's 2:15 and I get buckled in and the checklist is going fast and furious:

"Battery?" "ON"

"Flaps?" "Up",

"Gear?" "Down and Locked"

"Electrical system?" "Checked"

"Power Levers?" "Set"

"Left Engine?" "Start"

I push the engine "On" button which is a "black bulls eye" about a half inch in diameter located over my head...and off it goes. Jet engines are the "easiest" to light... not like those old radial engines we used to fly; those were an art to start, requiring multi-tasking and excellent finger dexterity. I scan all the engine related instruments as the engines warm up. The panel of the Falcon Jet is quite attractive with its green back-lit instruments, orange indicators, light blue background, little ruby colored

bulbs called "jewel lights". The cockpit is engulfed in a reddish hue. There are no white lights because they effect night vision...even our flashlights have red filters. I look towards the left wingtip to view the red navigation light and the green one on the right. They are illuminating the tarmac and adjacent hangers...it is all quite colorful.

"Ready to taxi?"—"Ready"

The inertial navigation system is set and I start the taxi while the other pilot busies himself programming the navigation system for the search. I call the tower....errrrrh...I wake up the controller at the tower. We are the only ones out here at this hour...he gives me clearance to taxi.

It's 2:25 and are about 5 minutes late...must have been that extra few minutes rolling out of bed...but we are still better than the pizza man!

"Navy Corpus tower Coast Guard Rescue 2001 ready for takeoff...runway 31...southeast departure...VFR"

"Rescue '01 cleared for takeoff"

We take the runway and I notice that the rain has subsided,

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GOODE (CONTINUED)

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but a wet wind is blowing at about 30 MPH with a right-to-left crosswind; the runway is wet so I have to be careful about traction and hydroplaning in case of an aborted takeoff, I notice a skuzzy layer of clouds at about 500 feet, and think...it's awful dark up there.

I have my left hand on the steering wheel which maneuvers the aircraft while on the ground. It is a wheel of about 10 inches in diameter and located barely within reach of my left hand and adjacent to the seat. My right hand is on the throttle or "Power Levers" as they are called in the jet age. There are two levers that split the throttle handle, one for each engine. My hand fits the handle perfectly...it splits my four fingers with the middle and index fingers on the left portion of the handle and the ring and pinkie on the right portion. My thumb is positioned horizontal and caresses the small thrust reverser latch button on the side of the handle. The handle has an aluminum knurled finish. The texture of the handle feels so good and I often push the button with my thumb as a soothing jester; it doesn't do anything except releases some pent up energy...the two levers travel in unison and soooooo smooth...it's exhilarating to know there is so much horsepower (5000 horsepower per engine) connected to those levers and available through the action of my hand.

Once cleared I gently push the power levers forward with my right hand and the aircraft starts moving past the yellow "hold short" line. With the steering wheel I position the aircraft inline with the runway centerline and bring the throttles to full thrust position.

Naval ships and aircraft are regarded as female and this vessel remains true to it's namesake...she responds so very well to gentle even movements. She starts rolling down the runway, the speed increases and the rudder becomes effective; I commence steering with the peddles, my left hand departs the steering wheel and I place the tips of my three middle fingers on the underside of the yoke with my thumb lightly touching the vertical portion. I maneuver the yoke with smooth gentle movements to compensate for the crosswind; she fly's like a dream when treated with affection.

As we accelerate down the runway, I feel the transition of the aircraft from the burdens of gravitational forces to the gracious effects of aerodynamics. The co-pilot is calling out the speeds as we accelerate: 60...80...100. At 120 he says: "Rotate". I gently pull back on the yoke and set the nose up 10° and she becomes airborne.

"Gear up?"-"Selected". "Three up-Pilot" I touch the indicators with my fingers to confirm indications. "Three up-Co-Pilot" The Co-Pilot also touches the indicator
 "Flaps up?" "Flaps up"
 "Power Levers?" "Set"

I glance at the engine instruments to note the ITT (Inter-stage Turbine Temperature) and N1 speed (the speed of the power turbine), these instruments give an indication of the power output of the engines; lack of power will slow the climb and excess power can damage the engine. I also notice the airspeed and notice it is approaching 200 MPH. I pull back on the power levers to set the airspeed at 200 MPH; there is a "speed limit" at this altitude.

Still flying with the tips of my fingers on the yoke, I start a gentle bank to the left while adjusting the pitch and power to maintain 200 MPH and 1500 feet-per-minute climb rate. The turn puts me over the city. The city lights are illuminating the tumultuous overcast sky. I can see the ominous dark water laden clouds in the skuzzy layer glaring at me like evil demons. I can also see the various storms scattered around with the shafts of rain falling to earth like a painters gray strokes on canvas. Corpus Christi is a pretty city at night from this perspective. The bay shimmering with navigation lights, the well lighted harbor with an array of anchored sailboats, and a very attractive skyline. As we fly over the residential areas, I can't help but think of all those "mere mortals" sleeping comfortably in their beds dreaming of flying like us... "The High and Mighty" Coast Guard Aviators. I feel privileged to have this opportunity to be airborne, fly this wonderful aircraft, and be on this life saving mission...PRIVELEDGED INDEED!

It's 2:35 AM as we head out to sea. Our en-route flight profile will be a parabola with the apex at 10,000 feet and a ground track base of approximately 200 miles; this will give us optimum fuel efficiency. It will take us about 45 minutes to reach the boat -in-distress. We have left the lights of the city and all that remains to light up the sky are patches of starlight and the aircraft navigation lights; I don't see a moon but there must be one out there somewhere illuminating the night. I can see the ocean waves below with seas of about 30 feet. I also notice the wispy white caps of the sea produced by the storm. Adding to the colorful display of the panel is the weather radar. We use it to pick our way through the thunderstorms. It's like an electronic computer game as we navigate through the light greens of the screen and avoid those deep red sections where the heart of evil thun-

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GOODE (CONTINUED)

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derstorms reside. But the game is real...outside the windshield we can see the dark canyons bounded by those dark towering cumulonimbus clouds, feel the aircraft movements caused by turbulence, and hear the sound of the rain strike the fuselage.

It's 3:10 and we are descending to the reported position. We have

received the pertinent data about the vessel while en-route to the scene. The vessels name is the "Cajun Princess" ; it's home-port is Morgan City, La; it is taking on water; and there are three persons on board. I call her on the radio:

" Cajun Princess Cajon Princess, this is Coast Guard aircraft 2001, over"

The skipper answers with a Cajun accent. "Cooosta Gard this is Cajin Princess, cuume back"

"Skipper this is Coast Guard '01, got you loud and clear, we are approximately 15 minutes out, request a ten-count, come back"

"Capt'n I got you the same, glad to hear your voice, what is a ten-count?, cuume back"

" Roger skipper, just count up to 10 and down to 1, come back"

"10-4 Capt'n, 1 2 3 4 5 6 7 8 9 10 9 8 7 6 5 4 3 2 1, come back"

We have the direction finder (DF) tuned into the emergency frequency. The ten-count allows enough on-air time to home into the ships transmission. As he calls the ten-count the DF needle swings around the compass dial like a drunken sailor trying to locate the boats direction....it finally picks up the signal and swings back-and-forth between the left and right side of the compass dial till it fixes the head of the needle directly towards the ship...like an arrow that has found it's mark.

SWOOOOSHHH----WAAAANGGGGGG.....GOTCHA!

There is no greater feeling in SAR than to know that you have established contact with the distressed vessel and know there is a good chance of saving the persons on-board. It is the first significant milestone in the mission. I advise the radar operator about the direction of the vessel and he locates the vessel on the radar screen at about 50 miles.

"Cajun Princess we have a fix on your position and will be there in 10 minutes, how you holding up, come back"



"Capt'n, we are still taking on water and barely afloat but the engines are still running."

"Roger that skipper, we will be dropping you a dewatering pump to keep you afloat and a Coast Guard Cutter is on it's way to tow you back to port"

"10-4 Capt'n"

Such an easy thing to say, "drop a dewatering pump", but it is one of the most difficult maneuvers to perform in a Coast Guard HU-25 jet. A dewatering pump is a small gasoline powered pump stuffed in a 2 X 2 X 3 foot fiberglass canister; a couple of gallons of fuel are also stuffed in the canister. The canister has a parachute and a 400 foot manila rope; the parachute serves to reduce the impact at which the canister hits the water and the manila rope is used to pull the canister aboard the boat. In addition,

just before it hits the water an explosive device is detonated separating the chute from canister; this is to prevent the chute from becoming a drogue.

The aircraft has to be flown as slow as possible (131 MPH) to prevent damage to the canister but not so slow that the aircraft loses altitude; the aircraft has to be flown at a precise altitude (125 feet +/- 25) so that the timed parachute detonator releases the canister before it hits the water...too late will drown the canister and too early will cause damage; the aircraft has to be flown directly upwind so the manila rope does not drift away from the vessel; and the drop point has to be..."PRECISE"...so the rope does not overshoot or undershoot the vessel. This...of course...has to be done with gusty winds, high seas, driving rain, and a moving target.

Ideally, the drop is made directly over the ship. The manila rope unfurls the free end with it's momentum while the parachuted canister anchors the other end. The parachute drifts downwind and away from the boat as the rope falls downward and drapes the deck of the ship. Approximately 50 feet upwind from the boat and a few feet above the water the chute separates and the canister and hits the water...hopefully still attached the rope. The crew then pulls the canister on-board and begins the dewatering process.

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GOODE (CONTINUED)

(Continued from page 10)

It's 3:25 A.M. and we have a visual fix on the vessel. As we fly over the vessel, I can see that she has very little free-board; her outriggers are extended and is carrying a few knots of way-on (forward movement) as she struggles with the waves. She is cruising perpendicular to the waves and her bow dips the sea swamping the deck at the bottom of every trough. I can see two crewmen on the deck struggling to bale water as they hold on to dear life. The wind is driving rain and sea mist across the deck causing crewmembers to lean against it and fight for footing as the boat rolls and pitches.

We drop a smoke flare after our first pass so we can get a visual indication of the wind and the sea conditions. We are 500 ft. above the surface as we take our downwind leg of the drop pattern using the smoke

flare as a wind indicator. The aircraft has a hatch at mid-fuselage just large enough for the canister. The canister is suspended from an overhead hook with a manually operated release latch. The dropmaster rigs the canister as we go through our check list. We complete the check list abeam of the Cajun Princess and we maintain a "sterile cockpit" as we turn base leg and prepare to give a "10 second warning". Sterile cockpit means...there is absolute silence in the aircraft; any sound may cause the dropmaster to prematurely drop the canister.

We turn final approach and I see the Cajun Princess directly ahead.

"10 second warning"

"Roger, 10 seconds"

There is absolute silence except for the sound of the engine, rain striking the fuselage, and the friction of the wind. With my fingertips of my left hand on the yoke and my right hand on the throttle levers I maneuver the aircraft down to 125 feet, maintain airspeed at 131 MPH, and adjust the heading to keep the boat directly on the nose. I am getting close enough now that I can see the two crewmembers on the deck, their haggard faces fixated on the aircraft with anticipation of the drop. I can see the skipper at the helm struggling to keep the ship on an even course as he turns his head to see the approaching aircraft...we make eye contact as the ship disappears under the nose. I count

a second-and-a half with the beats of my heart.

"DROP"

"Drops away"

I add power and commence my climbing left turn.

"Capt'n we got the rope....good drop"

"Roger that Skipper"



The crew-members in the back of the plane are cheering and "high-fivin" each other. I turn to my commander co-pilot and he gives me a reassuring smile and a thumbs-up...I smile back at him and return the thumbs-up.

We continue to circle the boat till they get the pump operational and the Cajun Princess begins to re-float.

"Skipper, looks like you got things under control. We are departing

back to home base."

"10-4 Capt'n, have a good trip"

It's 4:00 A.M. as we depart the scene for an uneventful return flight to Coast Guard Air-station Corpus Christi.

It's 5:00 A.M. when I get back in bed and thinking...two more hours of duty...and it's over.

It's 3:00 P.M two days later and am in the station office on my last day in the Coast Guard. The CO hands me a crumpled note and says; it's from the Cajun Princess. The note had been written by the skipper of the SAR case a couple of days ago. It had been handed to the CO of the cutter Point Hope that towed her into port. He handed it to a helicopter pilot who had flown it to Corpus and given it to the Operations Officer, who then gave it to the base CO, who then gave it to me. It had salt water stains and the ink was running. In cursive it read:

Capt'n

That was a really good drop. The pump worked like a charm. Y'all saved my boat.

Thanks,

Henri Limineux

Skipper, Cajun Princess

I knew then....WHAT IT WAS ALL ABOUT!



I Learned from THAT! - Which Way is North?

Chuck Fisher

It seems that lately I am writing an awful lot of “I learned from that” articles – so either I am really stupid, or no one else is speaking up. In this case, though both may be true, apparently someone else spoke up because this issue was recently the subject for FAA Special Airworthiness Information Bulletin CE-15-01

I had a Stolp Starduster, an experimental steel tubing and fabric biplane. She was a wonderful little plane but was very basic. Navigation instruments were never a real concern as the attitude indicator was sort of all around me in the form a horizon visible from shoulders any aspect in the open cockpit, and if I was really flying where I’d get lost, I was probably out of gas too! Nonetheless, I did decide that it would be really cool and much more contemporary to put in an attitude indicator for the inevitable time that I needed help deciding if my head was pointing toward soft stuff or hard stuff.

Gyro indicators are still prevalent in the certificated world, but for experimentals there is no reason to install heavy, maintenance intensive, unreliable systems. So, I decided on a Dynon D-10. They were a lot cheaper then by the way! Anyway, this little gem plugged straight into a standard 3.25 inch hole, that I just happened to have already, and provided everything – heading, airspeed, altitude, pitch references, attitude and was ridiculously simple to install and equally simple to use.

Installation was a breeze. I had to plug it in, connect the power wire, and hook up the heading and reference box. The only rub was – where to put the cigarette pack sized heading and reference sensor. It was supposed to be on a stable, horizontal or vertical fixed surface away from steel/magnetic influence. In a round, cloth and steel plane there are relatively limited surfaces that answered that requirement. Hmmm.

Behind the pilot’s headrest was the baggage compartment. It was actually pretty roomy, maybe 12 x 8 x 24 inches, and it had a plywood horizontal floor. Voila! So, this intrepid pilot, owner now avionics expert suspended the sensor box using vibration insulating mounts on the underside of the baggage compartment floor. Horizontal, isolated, out of the way – perfect.

I took the plane outside and using my trusty cell phone GPS compass to confirm what the vertical card compass said, calibrated the EFIS. Then, I dragged the airplane around in a couple

circles just to make sure it was correct and it worked like a charm. Wow, I had a glass cockpit biplane – how cool is that!

A couple days later the weather was awesome and it was time to fly – I had to find a place to go to lunch so I could show off my new toy. So, having not been in the air in a while, I did a good thorough preflight, buttoned up all the fasteners, tossed my pubs bag in headrest compartment, grabbed the headset and off we went almost due north to Fredericksburg. North. Well at least the compass said north and my eyeballs said north, but the D-10 said something like southeast.

Obviously I had screwed something up, so when I got to my destination I grabbed my stuff, had lunch and studied the manual – yes honey I did read the instructions. I went back out to the plane, powered it up and checked the heading on the ground. It was spot on. Jeesh. So, grabbed the headset, tossed the bag in the compartment, jumped and headed home – northeast. Huh?

The story repeats itself over and over again. I took it out, put it in, drove all over the airport and it was fine. Finally, exasperated and ready to send it back I flew up to Kerrville where there was a compass rose. Got out, walked around in circles and having committed to memory every word in the instructions recalibrated the errant wayward compass and ensured it was perfect.

I fired up and taxied out watching the thing like a hawk. Typically when taxiing I didn’t spend a lot of time looking at the panel. This time I did. I noticed that as I turned on the ground to run up the compass did not move. Then, as I climbed out it moved rather dramatically. Hmm, that’s odd, why would a straight climb-out jerk the compass around? After all those weeks, a light bulb finally came on.

I landed and taxied back to the compass rose, emptied everything out of the baggage compartment and recalibrated the compass again. All I had in there was an extra headset and my pubs bag with my charts...and instructions for the EFIS. I left the power on so I could see the D-10 and one by one I put stuff back in the compartment. When I tossed my little pubs bag in the compartment, there it went—the heading shifted by several degrees.

I started pulling charts out of the bag wondering why – all I had was paper, a fuel checker and my screwdriver to close the cowl-

(Continued on page 13)



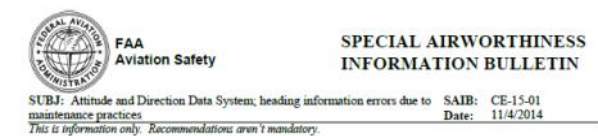
(Continued from page 12)

ing...my magnetic tipped screwdriver.

The FAA issued Special Airworthiness Information Bulletin CE-15-01 about maintenance practices around EFIS systems that use ultra-sensitive AHRS type devices. These new electronic devices are extraordinarily accurate, but also extraordinarily sensitive. Standard maintenance practices can not only damage them, but having any sort of magnetic device in their proximity during maintenance, calibration or use can render them totally unreliable. If they are calibrated with the magnetic screwdriver in the mechanics pocket they may calibrate just fine – with the mechanic as true north.

If any of you, like me, shop at the Harbor Freight, Lowes or Home Depot aircraft tool departments, you'll notice that it is actually hard to find a flat blade screwdriver that does not have a magnetic tip, and we all have mongo magnets we use to fish out all the stuff we drop. And, remember that if you use a magnet on a steel screw, it can become magnetized itself.

Because of the super sensitivity of these devices, electronic EFIS are particularly susceptible to influence by magnetized tools – that we probably all have in the toolbox or our pockets when working on the plane.



So, in my case when I climbed the flight-bag would slide back in the long baggage compartment magnetically dragging the compass with it – which is why it was fine

on the ground but not in the air. In a tiny airplane where I could see the ground and was never more than an hour from home, it was no big deal. However, if I had been reliant on that same heading system in IFR conditions this could have been a really big problem.

So, if you have or are thinking of installing an electronic heading system, know where your sensor is and very carefully isolate it from magnetic influences in flight and during maintenance. Remember, if yours, like mine was, is anywhere near baggage something in those bags can totally throw it off and you might not know it.

Well, once again....I learned from that!



Safety Officer's Notes—Silent Killer

Ron O'Dea

In October Mike Busch, "Savvy Aviator", wrote an outstanding article about the dangers and sources of CO poisoning. His full article can be found at <http://blog.aopa.org/opinionleaders> and contains some really good checklists, links and aids. Many of us at San Geronimo have been personally touched by the dangers of Carbon Monoxide—and I hope you'll read and head this monograph!

Reprinted with permission of the author from <http://blog.aopa.org/opinionleaders/2014/10/20/carbon-monoxide-silent-killer/>

Mike Busch

On January 17, 1997, a Piper Dakota departed Farmingdale, New York, on a planned two-hour VFR flight to Saranac Lake, New York. The pilot was experienced and instrument-rated; his 71-year-old mother, a low-time private pilot, occupied the right seat. Just over a half-hour into the flight, Boston Center got an emergency radio call from the mother, saying that the pilot (her son) had passed out.

The controller attempted a flight assist, and an Air National Guard helicopter joined up with the aircraft and participated in the talk-down attempt. Ultimately, however, the pilot's mother also passed out.

The aircraft climbed into the clouds, apparently on autopilot, and continued to be tracked by ATC. About two hours into the flight, the airplane descended rapidly out of the clouds and crashed into the woods near Lake Winnepesaukee, New Hampshire. Both occupants died.

Toxicological tests revealed that the pilot's blood had a CO saturation of 43% — sufficient to produce convulsions and coma—and his mother's was 69%.

On December 6 that same year, a physician was piloting his Piper Comanche 400 from his hometown of Hoisington, Kansas, to Topeka when he fell asleep at the controls. The airplane continued on course under autopilot control for 250 miles until it ran a tank dry and (still on autopilot) glided miraculously to a soft wings-level crash-landing in a hay field near Cairo, Missouri.

(Continued on page 14)

Carbon Monoxide, Silent Killer

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The pilot was only slightly injured, and walked to a nearby farmhouse for help. Toxicology tests on a blood sample taken from the lucky doc hours later revealed CO saturation of 27%. It was almost certainly higher at the time of the crash.

Just a few days later, a new 1997 Cessna 182S was being ferried from the Cessna factory in Independence, Kansas, to a buyer in Germany when the ferry pilot felt ill and suspected carbon monoxide poisoning. She landed successfully and examination of the muffler revealed that it had been manufactured with defective welds. Subsequent pressure tests by Cessna of new Cessna 172 and 182 mufflers in inventory revealed that 20% of them had leaky welds. The FAA issued an emergency Airworthiness Directive (AD 98-02-05) requiring muffler replacement on some 300 new Cessna 172s and 182s.

About 18 months later, the FAA issued AD 99-11-07 against brand new air-conditioned Mooney M20R Ovations when dangerous levels of CO were found in their cabins.

Not just in winter

A search of the NTSB accident database suggests that CO-related accidents and incidents occur far more frequently than most pilots believe. Counterintuitively, these aren't confined to winter-time flying with the cabin heat on. Look at the months during which the following accidents and incidents occurred during the 15-year period from 1983 to 1997:

March 1983. The Piper PA-22-150 N1841P departed Tucumcari, N.M. After leveling at 9,600, the right front seat passenger became nauseous, vomited, and fell asleep. The pilot began feeling sleepy and passed out. A 15-year-old passenger in the back seat took control of the aircraft by reaching between the seats, but the aircraft hit a fence during the emergency landing. None of the four occupants were injured. Multiple exhaust cracks and leaks were found in the muffler. The NTSB determined the probable cause of the accident to be incapacitation of the PIC from carbon monoxide poisoning. [FTW83LA156]

February 1984. The pilot of Beech Musketeer N6141N with four aboard reported that he was unsure of his position. ATC identified the aircraft and issued radar vectors toward Ocean Isle, N.C. Subsequently, a female passenger radioed that the pilot was un-

conscious. The aircraft crashed in a steep nose-down attitude, killing all occupants. Toxicological tests of the four victims revealed carboxyhemoglobin levels of 24%, 22%, 35% and 44%. [ATL84FA090]

November 1988. The Cessna 185 N20752 bounced several times while landing at Deadhorse, Alaska. The pilot collapsed shortly after getting out of the airplane. Blood samples taken from the pilot three hours after landing contained 22.1% carboxyhemoglobin. The left engine muffler overboard tube was broken loose from the muffler where the two are welded. The NTSB determined probable cause to be physical impairment of the pilot-in-command due to carbon monoxide poisoning. [ANC89IA019]

July 1990. While on a local flight, the homebuilt Olsen Pursuit N23GG crashed about three-tenths of a mile short of Runway 4 at Fowler, Colo. No one witnessed the crash, but post-crash investigation indicated that

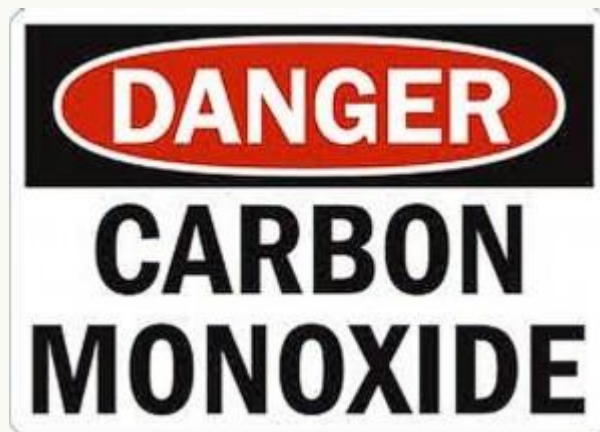
there was no apparent forward movement of the aircraft after its initial impact. The aircraft burned, and both occupants died. Toxicology tests of the pilot and passenger were positive for carboxyhemoglobin. [DEN90DTE04]

August 1990. About fifteen minutes into the local night flight in Cessna 150 N741MF, the aircraft crashed into Lake Michigan about one mile from the shoreline near Holland, Mich. Autopsies were negative for drowning, but toxicological tests were positive for carboxyhemoglobin, with the pilot's blood testing at 21%. [CHI90DEMO8]

July 1991. The student pilot and a passenger (!) were on a pleasure flight in Champion 7AC N3006E owned by the pilot. The aircraft was seen to turn into a valley in an area of mountainous terrain, where it subsequently collided with the ground near Burns, Ore., killing both occupants. A toxicology exam of the pilot's blood showed a saturation of 20% carboxyhemoglobin, sufficient to cause headache, confusion, dizziness and visual disturbance. [SEA91FA156]

October 1992. The pilot of Cessna 150 N6402S was in radio contact with the control tower at Mt. Gilead, Ohio, and in a descent from 5,000 feet to 2,000 feet in preparation for landing. Radar contact was lost, and the aircraft crashed into a wooded area, seriously injuring the pilot. Toxicological tests on the pilot's

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Carbon Monoxide, Silent Killer

(Continued from page 14)

blood were positive for carbon monoxide. Examination of the left muffler revealed three cracks and progressive deterioration. The NTSB found probable cause of the accident to be pilot incapacitation due to carbon monoxide poisoning. [NYC93LA031]

April 1994. Fifteen minutes after takeoff from Long Beach, Calif., the Cessna 182 N9124G began deviating from headings, altitudes and ATC instructions.

The aircraft did several 360- and 180-degree turns. The pilot reported blurred vision, headaches, nausea, labored breathing, and difficulty staying awake. The aircraft ultimately crashed in a vineyard near Kerman, Calif., and the owner/pilot was seriously injured. Post-crash inspection revealed numerous small leaks in the exhaust system. The pilot tested positive for carbon monoxide even after 11 hours of oxygen therapy. [LAX94LA184]

October 1994. A student pilot returned to Chesterfield, Mo., from a solo cross-country flight in Cessna 150 N7XC, complaining of headache, nausea, and difficulty walking. The pilot was hospitalized, and medical tests revealed elevated CO which required five and a half hours breathing 100% oxygen to reduce to normal levels. Post-flight inspection revealed a crack in an improperly repaired muffler that had been installed 18 hours earlier. [CHI95IA030]

March 1996. The pilot of Piper Cherokee 140 N95394 stated that she and her passenger became incapacitated after takeoff from Pittsburg, Kan. The airplane impacted the terrain, but the occupants were uninjured. Both were hospitalized, and toxicological tests for carbon monoxide were positive. A subsequent examination found holes in the muffler. [CHI96LA101]

August 1996. A Mankovich Revenge racer N70377 was #2 in a four-airplane ferry formation of Formula V Class racing airplanes. The #3 pilot said that the #2 pilot's flying was erratic

during the flight. The airplane crashed near Jeffersonville, Ind., killing the pilot. The results of FAA toxicology tests of the pilot's blood revealed a 41% saturation of carboxyhemoglobin; loss of consciousness is attained at approximately 30%. Examination of the wreckage revealed that the adhesive resin that bound the rubber stripping forming the firewall lower seal was missing. The NTSB determined probable cause of the accident to be pilot incapacitation due to carbon monoxide poisoning. [CHI96FA322]

CO EMERGENCY CHECKLIST

If your electronic CO alarm goes off in flight, what should you do? Here are some suggestions:

1. Start breathing supplemental oxygen (if available). Turn up the oxygen flow to maximum. Going on O2 will reduce your CO intake and will increase the rate at which your COHb saturation will dissipate.
2. Lean the engine as aggressively as possible to reduce the CO content of the exhaust. An engine operating lean of peak (LOP) has very low levels of CO in its exhaust.
3. If the cabin heat is on, shut it off. Cabin heat is the principal cause of high-level CO contamination in single-engine airplanes.
4. Open all cabin fresh-air vents. In most cases, this will help reduce CO in the cabin. Under rare conditions, however, it could have the opposite effect—so keep a close eye on the CO concentration readout. (A fast-acting readout is a big help here.) DO NOT open the pilot storm window, because doing so reduces cabin pressure and will usually make things worse.
5. Take steps to land the airplane as soon as practicable. If CO concentration is above 50-70 ppm, or if you have any symptoms of CO poisoning or hypoxia (e.g., headache, nausea, double vision), consider declaring an emergency.

January 1997. The fatal crash of Piper Dakota N8263Y near Lake Winnepesaukee, N.H. (described previously). [IAD97FA043]

December 1997. Non-fatal crash of Piper Comanche 400 N8452P flying from Hoisington to Topeka, Kansas (described previously). [CHI98LA055]

December 1997. A new Cessna 182S was

being ferried from the factory in Independence, Kan., to a buyer in Germany when the ferry pilot felt ill and suspected carbon monoxide poisoning (described previously). [Priority Letter AD 98-02-05]

Overall, deaths from unintentional carbon monoxide poisoning have dropped sharply since the mid-1970s thanks mainly to lower CO emissions from automobiles with catalytic converters (most CO deaths are motor vehicle-related) and safer heating and cooking appliances. But CO-related airplane accidents and incidents haven't followed this trend. The ADs issued against Independence-built Cessna 172s and 182s and Mooney Ovations demonstrates that even brand new airplanes aren't immune.

Close calls

In addition to these events in the NTSB accident database where CO poisoning was clearly implicated, there were almost certainly scores of accidents, incidents, and close calls where CO was probably a factor.

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Carbon Monoxide, Silent Killer

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In January 1999, for example, a Cessna 206 operated by the U.S. Customs Service was on a night training mission when it inexplicably crashed into Biscayne Bay a few miles off the south Florida coast. The experienced pilot survived the crash, but had no recollection of what happened. The NTSB called it simple pilot error and never mentioned CO as a possible contributing factor.

However, enough carboxyhemoglobin was found in the pilot's blood that the Customs Service suspected that CO poisoning might have been involved.

The agency purchased sensitive industrial electronic CO detectors for every single-engine Cessna in its fleet, and discovered that many of the planes had CO-in-the-cockpit problems. On-board CO detectors and CO checks during maintenance inspections have been standard operating procedure for the Customs Service ever since.

How much CO is too much?

It depends on whom you ask.

EPA calls for a health hazard alert when the outdoor concentration of CO rises above 9 parts per million (ppm) for eight hours, or above 35ppm for one hour. OSHA originally established a maximum safe limit for exposure to CO in the workplace of 35 ppm, but later raised it to 50 ppm under pressure from industry.

The FAA requires that CO in the cabin not exceed 50 ppm during certification testing of new GA airplanes certified under FAR Part 23 (e.g. Cessna Corvallis, Cirrus SR22, Diamond DA-40). Legacy aircraft certified under older CAR 3 regs required no CO testing at all during certification.

Once certified, FAA requires no CO testing of individual aircraft by the factory, and no follow-up retesting during annual inspections. A March 2010 FAA SAIB (CE-10-19 R1) recommends checking CO levels with a hand-held electronic CO detector during ground run-ups at each annual and 100-hour inspection, but in my experience very few shops and mechanics do this.

UL-approved residential CO detectors are not permitted to alarm until the concentration rises to 70 ppm and stays there for

four hours. (This was demanded by firefighters and utility companies to reduce the incidence of nuisance calls from homeowners.) Yet most fire departments require that firefighters put on their oxygen masks immediately when CO levels reach 25 ppm or higher.

It's important to understand that low concentrations of CO are far more hazardous to pilots than to non-pilots. That's because the effects of altitude hypoxia and CO poisoning are cumulative.

For example, a COHb saturation of 10% (which is about what you'd get from chain-smoking cigarettes) would probably not be noticeable to someone on the

ground. But at 10,000 feet, it could seriously degrade your night vision, judgment, and possibly cause a splitting headache.

After studying this hazard for many years and consulting with world-class aeromedical experts, I have come to the following conclusions:

1. Every single-engine piston aircraft should carry a sensitive electronic CO detector.
2. Any in-flight CO concentration above 10 ppm should be brought to the attention of an A&P for troubleshooting and resolution.
3. Any in-flight CO concentration above 35 ppm should be grounds for going on supplemental oxygen (if available) and making a precautionary landing as soon as practicable.

Smokers are far more vulnerable to both altitude hypoxia and CO poisoning, since they're already in a partially poisoned state when they first get into the aircraft. Because of COHb's long half-life, you'd do well to abstain from smoking for 8 to 12 hours prior to flight.

Choosing a CO Detector

Chemical spot detectors: Stay away from those ubiquitous cheapo adhesive-backed cardboard chemical spot detectors that are commonly sold by pilot shops and mail-order outfits for under trade names like "Dead Stop," "Heads Up" and "Quantum Eye." They have a very short useful life (about 30 days), and are



Five CO detectors (left to right): chemical spot, UL-compliant residential (Kidde 2015), industrial (BW Honeywell), TSO'd panel-mounted (CO Guardian 551).

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Carbon Monoxide, Silent Killer

(Continued from page 16)

extremely vulnerable to contamination from aromatic cleaners, solvents and other chemicals routinely used in aircraft maintenance.

These things often remain stuck on the instrument panel for years, providing a dangerous false sense of security. What's worse, there's no warning that the detector is outdated or has been contaminated—in some ways, that's worse than not having a detector at all.

Even when fresh, chemical spot detectors are incapable of detecting low levels of CO. They'll start turning color at 100ppm, but so slowly and subtly that you'll never notice it. For all practical purposes, you'll get no warning until concentrations rise to the 200 to 400 ppm range, by which time you're likely to be too impaired to notice the color change.

Residential electronic detectors: Although battery-powered residential electronic detectors are vastly superior to those worthless chemical spots, most are designed to be compliant with Underwriter's Laboratory specification UL-2034 (revised 1998). This spec requires that

- (1) The digital readout must not display any CO concentration less than 30 ppm.
- (2) The alarm will not sound until CO reaches 70 ppm and remains at or above that level for four hours.
- (3) Even at a concentration of 400 ppm, it may take as much as 15 minutes before the alarm sounds.

For aircraft use, you really want something much more sensitive and fast-acting. I like the non-UL-compliant CO Experts Model 2015 (\$199 from www.aeromedix.com). It displays CO concentrations as low as 7 ppm and provides a loud audible alarm at concentrations above 25 ppm. It updates its display every 10 seconds (compared to once a minute for most residential detectors), which makes it quite useful as a "sniffer" for trying to figure out exactly where CO is entering the cabin.



This sensitive CO detector also is a clock/timer/stopwatch and will alert if the cabin altitude exceeds safe no-oxygen levels. <http://www.guardianavionics.com/aero553-101-001.html>

Industrial electronic detectors: Industrial CO detectors cost between \$400 and \$1,000. A good choice for in-cockpit use is the BW Honeywell GasAlert Extreme CO (\$410 from www.gassniffer.com). This unit displays CO concentrations from 0 to 1,000 ppm on its digital display, has a very loud audible

alarm with dual trigger levels (35 and 200 ppm).

Purpose-built aviation electronic detectors: Tucson-based CO Guardian LLC makes a family of TSO'd panel-mount electronic CO detectors specifically designed for cockpit use. These detectors detect and alarm at



This \$499 CO detector will interface with most EFIS and engine monitoring systems and can be installed with a remote warning light <http://www.guardianavionics.com/aero452-101-011.html>

50 ppm (after 10 minutes), or 70 ppm (after 5 minutes), and will alarm instantly if concentrations rise to 400 ppm. The digital display models (\$599 and up) will show concentrations as low as 10 ppm. Available from www.coguardian.com. Obviously, panel-mount detectors cannot be used as a sniffer to locate the source of a CO leak.

For more information...

There is an outstanding October 2009 research paper titled "Detection and Prevention of Carbon Monoxide Exposure in General Aviation Aircraft" authored by Wichita State University under sponsorship of the FAA Office of Research and Technology Development. The paper is 111 pages long, and discusses (among other things):

- » Characteristics of CO-related GA accidents
- » Evaluation of CO detectors, including specific makes and models
- » Placement of CO detectors in the cabin
- » Exhaust system maintenance and inspection

This research paper is available online at: <http://www.tc.faa.gov/its/worldpac/techrpt/aro949.pdf>



THE BUILDER'S CORNER

USING ANTI SEIZE OR HOW DOES THAT GRAB YA?

Mark Julicher

Fasteners that get hot should be coated with Anti-Seize Compound before they are torqued. Anti-seize is cheap insurance against a locked up and subsequently galled fastener. However, there are different compounds for different situations. In other words, it is not one seize fits all. (Oh ouch, that was even painful to write.)

Commonly found in many a toolbox is C5A anti-seize. This is a copper based formula made by the Loctite company and it is available as a paste or in a convenient stick. Because it is copper based, it is recommended on brass fittings. Lycoming recommends C5A on exhaust flange nuts. It is excellent for the brass exhaust nuts on Continental engines too.



Photos from Loctite Corp.

Aluminum based anti-seize is readily available at any auto parts store. Permatex makes an aluminum-copper-graphite based anti-seize that comes in a small tube - very handy in the toolbox. Just be careful because the tube looks a LOT like Permatex lapping compound. This anti-seize is good on highly stressed steel nuts and bolts and OK on spark plugs.



Photo from Permatex Corp.

Graphite based anti-seize. What? You have doubtless been told that graphite should never come close to your aluminum airplane - and that is correct; however, graphite based anti-seize is an exception. Graphite anti-seize is recommended on spark plug threads - that's all, nothing else. Saf-t-eze makes an aircraft grade graphite anti-seize.

Zinc based anti-seize is recommended for aluminum fasteners. Saf-t-eze makes a fine zinc based anti-seize.

Nickel based anti-seize is available for stainless steel and titanium and anywhere that copper contact must be avoided. This does not apply to most of us.

Some grades of anti-seize are labeled as marine grade - good to know if you work on boats.



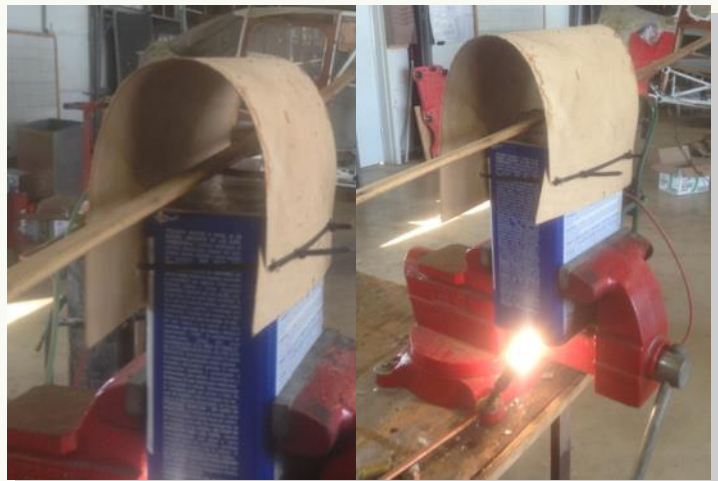
Photos from Saf-t-eze company

Remember to apply just a small dab of anti-seize and it will spread around as the fastener is tightened. Gobbing on anti-seize is poor practice. Also, these are conductive compounds so don't allow them to short out your spark plug electrodes.

Steam Bending Spruce

I needed to steam a piece of spruce in order to bend it. Materials used were a metal gallon can, a piece of 1/16 plywood and some zip ties.

The following photos show how I made an effective steamer. Yes, I rinsed the acetone out of that can first! I put about two inches of water in the can and it made a very effective steamer. I suppose a hot plate would have been good, but the acetylene torch was available.



NOVEMBER MYSTERY PLANE REVEALED

Doug Apsey

Congratulations to EAA Chapter 35 member Ira Wagner for correctly identifying our November mystery "aircraft" as the Laister-Kauffman CG-10/XCG-10A Trojan Horse. Ira also pointed out to me that since this was a glider, it was officially a mystery aircraft and not a mystery airplane. If you look up the definition of an "airplane", it is a powered heavier-than-air aircraft with fixed wings from which it derives most of its lift. Since the CG-10 is a glider, it does not fit the definition of an airplane. Never too old to learn something!

Honorable mention goes to Charlie Brame who made several attempts to name the aircraft before throwing in the towel but providing me with some great suggestions for future mystery aircraft in the process.

The USAAF contracted the Laister-Kauffman Aircraft Corporation in 1942 to develop a large troop/freight carrying glider built entirely of non-strategic material. The CG-10 prototype, designed by Jack Laister, first flew in 1942. The XCG-10A was a modified/enlarged version of the prototype CG-10 that began initial flight testing in 1943. Two XCG-10A's were delivered to the USAAF in 1944 for evaluation and the USAAF then contracted Laister-Kauffman to produce up to 1000 CG-10A's (number varies between sources) in November of 1944 for the intended purpose of carrying troops and supplies for the invasion of Japan. It appears between five and ten aircraft were built, or at least in production, before the contract was cancelled after the surrender of Japan.

Information on the CG-10 is sparse and contradictory, partly because the CG-10 and the XCG-10A were similar but different aircraft making it difficult to know exactly which aircraft an article is referring to. Both the CG-10 and 10A were made completely of wood with a plywood covering. The wingspan of both models was 105 feet. The fuselage of the 10A was 67 feet long with a cargo bay that measured 30 feet long, 8.5 feet, and 6.7 feet tall (these dimensions vary between sources). The XCG-10A had an empty weight of 12,000 lbs. and could carry a payload of 10,800 lbs. It could carry 42 fully equipped troops or a 105mm howitzer or a 2 1/2 ton truck, or one jeep and one 75mm howitzer. The deck was 2 feet off the ground and the rear of the aircraft had clamshell doors making loading and unloading much easier than with any of the other gliders or aircraft at that time.

To put the size of the XCG-10A into perspective for you, it was larger than a B-17 and the prototype had to be assembled in the



St. Louis Sports Arena. When fully loaded, it could not be towed by a single C-47 so were either towed by two C-47's or with a larger four engine airplane.

U.S. PRECEDENTS SET BY THE "TROJAN HORSE"*

- First with the rear clamshell doors and low level cargo floor under a high tail.
- First large aircraft to reposition the landing gear from under the wings to the sides of the fuselage.
- First to use multiple disk hydraulic brakes.
- Thought to be first to use thick wing skin as the primary wing bending structure.
- The strongest aircraft cargo floor prior to 1946.
- First to carry big military equipment like the 2-1/2 ton truck, etc.
- First to carry a "stick" of sixty paratroopers.
- Considered the largest proven successful near all wood aircraft built in the US

Sources for the article include: Aviationbanter.com; Silent Skies: Gliders at War 1939-1945 by Tim Lynch; US Warplanes by Bernhard C.F. Klein; daveswarbirds.com; Indianamilitary.org; *rec. aviation soaring newsgroup; Aviators Bulletin, Oct 2014



NAME THE PLANE

Doug Apsey

This month's mystery plane had great potential but never made it into production.

John Kauffman: Bridgeport, Connecticut



- So, who will be the first to tell me:
- What company built it?
 - What was its designation? i.e. C-172, PA-24, etc.
 - What role was it built to fulfill?
 - What airplane was it based on?
 - Within 3 years, what year did it first fly?



Brian and June Goode

SHIRT NEWS For everybody that placed an order for one of our EAA Chapter 35 logo emblazoned fishing shirts, the shirts are in. Most of them have been paid for and picked up, but if you haven't got yours yet, please give us a call.

If you forgot to place an order for a new shirt, we have five (5) extra shirts in inventory, so stop by the Country Store at the December Christmas meeting so you can have a new shirt for Christmas. You can call Brian or June to get it sooner. (688-0420)

Here's what we have in inventory. They are all men's sizes and there is one of each: Short Sleeves - Yellow - Large and Extra Large, Khaki - Large, Royal Blue - Extra Large, Long Sleeves - Sky Blue - Medium, All of these shirts are now priced at \$43.00.

NEW ITEM Sometime ago one of our Chapter members donated a Cessna Flight Training Sport / Private Pilot Course to the Chapter to be used as a Young Eagles fund raiser. This is a King School produced, on line learning program, no more DVD's or CD or tapes to mess with. The original price for this course was \$379.00. The Country Store has possession of the kit and will gladly place it into the hands of the first person who offers a reasonable donation. Please contact Brian at 688-0420, or email ladybgoode@msn.com, with your most generous offer.

POSSIBLE NEWER ITEM YET FOR THE COUNTRY STORE We are entertaining stocking a new South Texas weight, Port Authority® Lightweight Charger Jacket. The features of this jacket are: 100% polyester Taslan shell, 100% polyester lightweight fleece body lining, 100% polyester sleeve lining, • Front zippered pockets, Interior pocket, Port Pocket for easy embroidery access, Elastic cuffs with adjustable self-fabric tabs and hook and loop closures, Elastic waistband. We can offer this jacket for only \$39.00. The blue color is called "True Royal"

It will have the EAA Chapter 35 logo embroidered on the upper front left side of the jacket. Unisex sizes are: Small, Medium, Large and Extra Large. XXLarge are \$43.00.

We would like to get a few orders in hand before we place the initial order, so please call or email Brian or June Goode with your order. We will collect your money when the order is received. 688-0420 or ladybgoode@msn.com

LOG BOOK TOTE BAGS Don't forget to purchase one of our new Log Book Tote Bags before Christmas. They are not only good for storing your aircraft log books, but for general toting around of your laptop computer, iPad or personal "stuff" when traveling. Santa likes them.

These Tote Bags are adorned with the Colorized Chapter 35 logo on the front flap. They are made of 600D 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 could also be used for a computer bag or just a regular tote bag. They are only \$29.00. Some on line Pilot Shops sell a similar bag for \$69.00.



"Fishing Shirts"	(Inventory)	4	Short sleeve	\$43.00
		1	Long sleeve	\$43.00
NEW PORT AUTHORITY JACKET			SM-M-L-XL	\$39.00
True Royal Blue color			XXL	\$43.00
Young Eagles Tee Shirts			Various Sizes	\$5.00
Cloth Baseball Caps			EAA or Chapter 35	\$11.00
Mesh Top Logo Baseball Caps			Close out item	\$4.00
Chapter 35 Sew-On Logo Patches				\$3.00
Chapter 35 Bumper Stickers				\$1.00
Wheel Chocks - Aluminum			Two pairs = a set	\$45.00
"Wash Wax All" Cleaner or Degreaser			Pint -16 OZ	\$11.00
			Quart -32 Oz	\$16.00
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All prices include 8.25% sales tax

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2014 EAA Chapter 35 Leadership



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For Sale: Zenith 601 XL Project: I have a 601 XL kit for sale. The wings tail feathers are done. The fuselage is a quick-build kit. To many items to list. The spar mod needs to be done. I am asking \$17.5 K for the project. I have lots of pictures of the work and the aircraft. Al Lewallen hanger47@juno.com 619-884-9285 . *(expires Dec 2014)*

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 Contact: Dave Baker-Ph-210-410-9235, e-mail: iflyaerosport@sbcglobal.net

For Sale: 1951 Cessna 305A Bird Dog (TL-19/O-1) N88T, S/N23364, 440 hrs. since factory reman, fresh annual, US Army markings, Polished, Garmin 250XL GPS/COM, GTX 327 XPDR, Transcal SSD 120 encoder, Terra TX 760D COM, PM 4000 Audio

panel, Jasco 24V 50 Amp Alt , Bomb shackles, Increased gross weight - 2300# , 1509# EW, 792# useful load, 440 hours since restoration in 1998 by Steve Stires, See photos in August 2013 Runway 35. Based 8T8, \$78,000.00. Contact: Jeanette Hunt---210-688-9264 --e-mail: JaNet3679@aol.com or Dave Whitney, 210-912-0000---e-mail: dljwhit@hotmail.com *(expires DEC 2014)*



Reduced for quick sale!! Garmin 796, Brand New. COMPLETE with all accessories, \$1800.00 **Icom A24** Handheld Radio, complete with power adapter and headset adapter. Brand New. \$ 350.00 Two **Strong 26' canopy Seat Pack Parachutes**--Never Used! Re-packed April 2010. \$ 800.00 ea. **Teeter Hang-Ups Exercise equipment** ---Like New. \$ 350.00 Contact Jeanette Hunt at 210-688-9264 or e-mail at JaNet3679@aol.com. *(expires DEC 2014)*

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**

CHAPTER CALENDAR

DECEMBER	13	CHRISTMAS PARTY 	EAA Chapter 35 Clubhouse Social Hour 12:00 pm Lunch 12:30 pm Gift Exchange 1:30 to 3:00 pm
JANUARY	10	BOD Meeting Third Annual San Geronimo Day And Progressive Lunch	10:30 am Noon to ???

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>
- Fun Places <http://funplacestofly.com>

Thursday, Dec 18, 2014 IMC Club Monthly Chapter Meeting
San Marcos, TX. - (57 miles)
<http://redbirdskyport.com/about-skyport/imc-club/>

Saturday, Dec 13, 2014 Christmas At The Fort
Fort Parker Flying Field
Groesbeck, TX. - (195 miles)
<http://www.fortparker.com>



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Ron O'Dea, Membership Chairman
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The Official Newsletter of EAA
Chapter 35, San Antonio, TX

Chapter 35 meets
Each Second Saturday of the Month

13 December 2014

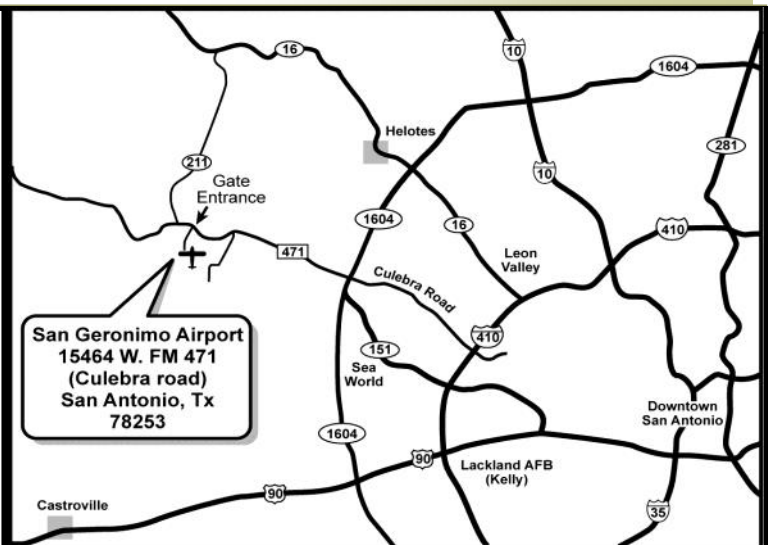
EAA Chapter 35 Holiday Luncheon

Social Hour 11:00 pm

Lunch 12:00 pm

Gift Exchange to follow

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](#)

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

www.35.eaachapter.org

PRESIDENTER COCKPIT

[For English Click Here](#)

Till alla medlemmar i EAA Kapitel 35 i San Antonio,
Vintern är på väg. Vi kanske inte har 8-9 meter snö, eftersom de nyligen hade i Buffalo, och vi behöver inte städa vår bana på San Geronimo Airpark med en snöplog eller snöslunga. Vänta bara tills solen kommer upp och 1 mm (vad nu det kan vara i bråkdelar av en amerikansk tum) snö smälter inom ett par timmar. Men vi kanske måste använda flygplanet värmare (om du har en i ditt flygplan), och sedan kan vi ha en ökad risk för kolmonoxid inandning, om gasläckor motorns avgas in i kabinen. Kolmonoxid (CO) förgiftning är mycket farligt. Du kan inte se eller lukta denna gas. Du får inte upplever några symptom från början, men långsamt och utan att du märker det, kan mycket lätta symptom på trötthet och huvudvärk utvecklas, och du kan ha en minskad reaktionstid, förvirring och försämrade prestanda, vilket kan leda till misstag och förlust av din flygande skicklighet. Ännu värre, om för mycket inandning av denna gas, kan det leda till medvetlöshet och det kan vara dödlig. En enkel metod för att mäta en kolmonoxid läcka, kan vara användningen av en kolmonoxid detektor. Det finns flera alternativ, men en billig jag precis köpt på Pilot Shoppe butiken nära San Antonio International Airport, var en CO-detektor (Aviation Supplies & Academics, Inc.). Det handlar om en millimeter (0,03937007874 US tum) tjock, som du kan sätta på en panel i ditt flygplan. Det kostar \$ 6 + skatt och bör bytas ungefär 12 månader efter öppnandet. Det blir grått eller svart, då CO är närvarande. Men ingen ljudsignal eller blinkande rött ljus.

AOPA: s och EAA: s verksamhet för att försöka stoppa kraven för Medical Certificate 3 för privata piloter med upp till 5 passagerare i flygplan upp till £ 6000. fortsätter med diskussioner mellan myndigheter och nya stöd från lagstiftning och medicinska samfund. "Den medicinska intyg reformen föreslås av EAA och AOPA skulle omfatta pilotutbildning på invalidiserande effekterna av mediciner - något som inte är en del av dagens tredje klassens process medicinsk certifiering", redovisas i EAA: s Sport Aviation Magazine. Inga beslut fattas hittills.

Som jag nämnde i mitt tidigare presidentens Cockpit, FAA precis godkänt tilläggs Pilot Program, vilket gör att homebuilders att använda en andra, kvalificerad testpilot för att

flyga under testflygningar av flygplanet. Jag insåg precis att ordet kvalificerad testpilot innebär att den andra testpilot måste ha fler meriter än den första testpilot. Den första testpilot måste ha en pilotcertifikat med en aktuell halvårs flygning översyn och ett läkarintyg (om privatflygcertifikat eller högre) och 3 tar start och landningar inom 90 dagar. Den andra testpilot, men behöver också 10 tar start och landningar inom 90 dagar, totalt 500 flygtimmar, 40 flygtimmar inom 12 månader, och flygerfarenhet i modellen eller familjen av den testade flygplan och 10 landningar i ämne flygplan (trehjuling) eller 20 om svanshjul. Jag hade hoppats att vara den andra testpilot i vårt snart färdig Zenith STOL CH701. Men om jag flyger 20 timmar till och få lite erfarenhet och 10 landningar i en annan STOL CH701 (mer än demo flygningar på Zenith Aircraft Company hade jag nio år sedan), jag tyvärr inte har tillräckliga kvalifikationer, även med om 1285 flygtimmar.

EAA35 har fått en preliminär inbjudan från Stinson flygplats 100-årsjubileum fest kommitté för att delta med flygplan och en Young Eagles Rally ibland i april / maj. Vi hade bara att ändra den sista YE Rally från San Geronimo till Stinson grund av dåligt väder och mjuka taxibanor och gräsyta. Under den utmärkta ledning Phil Vaneau, hade vi 12 flygningar med i 5 olika flygplan med 23 unga pojkar och flickor mellan 8 och 17 år. Allt fungerade smidigt och trevligt och det var en fin repetition, om vi beslutar att delta i denna unika firande av den näst äldsta fungerande allmänflyg flygfält i USA.

Nästa EAA35 händelsen blir julfest den 13 december på 12:00 -Om 15:00. Jag är ganska säker på att det kommer att bli kul. Men måste du köpa biljetter för julfest i förväg för planeringsändamål.

Alla är varmt välkomna att delta i denna final EAA 35 event under 2014.

Ulf Balldin