EAA 430 Flyer

Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

A Little Hangar Flying: Night VFR and Cold Starts

Editor's note: With the start of the New Year EAA 430 welcomes Mike Radford as chapter President, and renaming of the President's column to A Little Hangar Flying. Mike will be writing about lessons gleened from years of aviating in the most demanding environment of Bush Flying in Alaska: 38 years of Floats, Wheels and Skis and counting. Big Airplanes and small ones.

VFR to IFR: DANGER, particularly night VFR

I have lost over 30 friends and acquaintances in airplane crashes. I literally stopped counting. We here at Sequim Valley airport we just lost another pilot.

It is a dangerous situation. American research shows that 76 per cent of VFR into IMC accidents involve a fatality. The dangers of flying VFR into IMC have been recognized for a long time. Yet VFR pilots still fly into deteriorating weather and IMC.

In this issue we reproduce a January 2016 update from FlightSafety Australia entitled "*178 seconds to live—VFR into IMC*" that shows the issues are universal and relevant to every pilot.

Cold Weather Engine Damage

I have personally witnessed two engine failures on downwind in Alaska when the pilot got in and did not pre-heat enough, and their engines destroyed themselves shortly after takeoff.

During this cold snap we have had, I have repeated watched several guys start up and go at below 30 degrees. Maybe not now but later... Going at noon doesn't cut it either. The core of the engine is still cold.

The issue isn't thick oil as you might have been taught, but rather the tolerances between aluminum and steel parts when they are cold. There is a good article on this subject written by Mike Busch, that originally appeared in the January 1999 issue of Cessna Pilots Association Magazine and now available online at: http://www.avweb.com/news/maint/182846-1.html

Mike Radford

In This Issue

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On the Horizon: Calendar of Events

EAA Chapter 430 meets on the last Saturday of the month, in Hangar 10 at Sequim Valley Airport at 10:00 a.m. For directions and additional information about chapter programs, see the chapter website: http://www.eaa430.org

Date	Topic
Saturday January 28, 2017 10:00 a.m. Hangar 10 Sequim Valley airport	EAA Chapter 430 meeting 10:00 AM. Program: The Future of Sequim Valley Airport, by airport manager Andy Sallee.
Monthly Chapter meeting February 18, 2017 10:00 a.m. Hangar 10 Sequim Valley airport	Keith McMinn will talk about his experience flying US Air Force C-17 missions to Antarctica.
Saturday and Sunday February 25-26, 2017	The Northwest Aviation Conference & Trade Show Washington State Fair Events Center Puyallup, WA
Monthly Chapter meeting March 25, 2017 10:00 a.m. Hangar 10 Sequim Valley airport	Mike Lavelle will survey air racing events from pre-World War I to the eve of World War II. Air Race promoters attracted large crowds and international media attention despite the Depression. Having an air race enhanced the reputations of host cities. The economics of these events benefited aircraft engineers, manufacturers, pilots and their aircraft. The Bendix, Thompson and Schneider Trophy's became world famous and prized possessions. The National Air Races were a highlight of a troubled time. The presentation will discuss the role the air races played to enhance aviation awareness in the United States during this period of pre-world War II aircraft design and development.

EAA 430 Achieves Nonprofit Status!

After years of work by many editions of the EAA 430 Board, the chapter has officially been designated a 501(c)(3) nonprofit entity by the Internal Revenue Service, effective December 2016. This means that all donations to the chapter are now tax deductible!

EAA 430 Scholarship Student Update

Seth Mulhausen has had a busy semester at Rocky Mountain College in Billings. He's is a member of the NIFA Flight Team and they competed last fall against Utah State, Colorado Metro, Colorado Northern Community College, Westminster College, and the US Air force Academy, at Logan, Utah. The first evening was aircraft recognition and Seth did well, identifying the older GA airplanes from the US (as well he should having worked at the Port Townsend Aero Museum, home to many old airplanes), not so well identifying old Russian airplanes. In the flying events Seth competed in the navigation and short field landing competitions. Other non-flying competitions included Pre-flight and Simulated Comprehensive Navigation. Seth enjoyed the competition and learned a lot by observing how other teams competed.

Grade wise he is maintaining a cumulative GPA of 3.6 and next semester will be taking Aviation Safety, Advanced Aircraft Systems, CFI Ground, 737 Aircraft Systems, and a one credit class in Altitude Chamber training (always fun to watch your fingertips turn blue). In addition he's continuing as a Flight Team member.

In flight training Seth is about a third of the way through his Commercial Pilot curriculum and his major flight goal for the next semester is to complete the long cross country. He mentioned something about Montana's winter weather being a challenge. No kidding; it gets seriously cold and nasty there.

Dave Miller
Scholarship Chair

FAA Issues General Aviation Medical Rule

From FAA.gov website News, January 9, 2107

The Federal Aviation Administration (FAA) today issued a final rule (PDF) that allows general aviation pilots to fly without holding an FAA medical certificate as long as they meet certain requirements outlined in Congressional legislation.

"The United States has the world's most robust general aviation community, and we're committed to continuing to make it safer and more efficient to become a private pilot," said FAA Administrator Michael Huerta. "The BasicMed rule will keep our pilots safe but will simplify our regulations and keep general aviation flying affordable."

Until now, the FAA has required private, recreational, and student pilots, as well as flight instructors, to meet the requirements of and hold a third class medical certificate. They are required to complete an online application and undergo a physical examination with an FAA-designated Aviation Medical Examiner. A medical certificate is valid for five years for

pilots under age 40 and two years for pilots age 40 and over.

Beginning on May 1, pilots may take advantage of the regulatory relief in the BasicMed rule or opt to continue to use their FAA medical certificate. Under BasicMed, a pilot will be required to complete a medical education course, undergo a medical examination every four years, and comply with aircraft and operating restrictions. For example, pilots using BasicMed cannot operate an aircraft with more than six people onboard and the aircraft must not weigh more than 6,000 pounds. A pilot flying under the BasicMed rule must:

- possess a valid driver's license;
- have held a medical certificate at any time after July 15, 2006;
- have not had the most recently held medical certificate revoked, suspended, or withdrawn;
- have not had the most recent application for airman medical certification completed and denied;
- have taken a medical education course within the past 24 calendar months;
- have completed a comprehensive medical examination with a physician within the past 48 months;
- be under the care of a physician for certain medical conditions;
- have been found eligible for special issuance of a medical certificate for certain specified mental health, neurological, or cardiovascular conditions, when applicable;
- consent to a National Driver Register check;
- fly only certain small aircraft, at a limited altitude and speed, and only within the United States; and
- not fly for compensation or hire.

The July 15, 2016 FAA Extension, Safety, and Security Act of 2016 directed the FAA to issue or revise regulations by January 10, 2017, to ensure that an individual may operate as pilot in command of a certain aircraft without having to undergo the medical certification process under Part 67 of the Federal Aviation Regulations, if the pilot and aircraft meet certain prescribed conditions outlined in the Act.

The FAA and the general aviation community have a strong track record of collaboration. The agency is working with nonprofit organizations and the not-for-profit general aviation stakeholder groups to develop online medical courses that meet the requirements of the Act.

178 seconds to live—VFR into IMC

from FlightSafety Australia
January 22, 2016

Flights operating under visual flight rules (VFR) flying into instrument meteorological conditions (IMC) remains a prominent safety issue, with the Australian Transport Safety Bureau recording 111 occurrences over the last 10 years, investigating 18 serious incidents and accidents.

A decade after publishing 178 seconds to live, we look back at our cover story from 2006 and the safety advice still relevant today.

It's an all too common scenario: a VFR pilot flies into IMC and needs help.

On average, Australian air traffic controllers are called upon once every 10 days to assist a pilot in deteriorating weather. Of the reported occurrences, 60 per cent are above cloud and can't get down. The remainder are either in deteriorating weather, in cloud or have reduced visibility due to smoke or haze.

It is a dangerous situation. American research shows that 76 per cent of VFR into IMC accidents involve a fatality. The dangers of flying VFR into IMC have been recognized for a long

time. Yet VFR pilots still fly into deteriorating weather and IMC.

From *Flight Safety Australia* January-February 2006…

Flight Safety Australia's cover from 2006

Some of these pilots may simply underestimate the danger and overestimate their ability to cope with flight in reduced visibility. The pilots of the 24 fatal aircraft accidents involving continued flight into IMC in Australia over the 10 years from 1992 to 2002 probably thought the same thing. Fifty-four lives were lost in these accidents.

At some stage in your flying you will encounter bad weather—unless you only fly on perfect weather days.

Spatial disorientation is the big danger. And it can happen a lot faster than you might think—just 178 seconds on average, about the length of a commercial on TV. That estimate is based on studies in the 1990s by aviation researchers at the University of Illinois. They took 20 VFR pilots and got them to fly into IMC in specially programmed flight simulators.

All of the pilots in the study went into graveyard spirals that would have ended in uncontrolled flight into terrain or rollercoaster-like oscillations that became so intense that they would have resulted in structural failure of the aircraft.

In repeated tests on the simulator the result was the same—all pilots lost control of the aircraft. The outcome differed only in the time required before control was lost which ranged from just 20 seconds to 480 seconds.

A close look at one VFR into IMC incident illustrates the dangers.

In 1999, a pilot was conducting a visual flight rules (VFR) flight from Walgett to an airstrip near Merriwa. The Piper Archer had departed from Walgett earlier in the day, but returned a short time later when it was reported that weather at the destination was not suitable for VFR flight.

However, the pilot felt under pressure to complete the flight that day. He continued to monitor the weather by telephoning for weather reports from an automatic Bureau of Meteorology outlet and by contacting a friend near the destination airfield.

The aircraft departed again at 1415. But the pilot never reached Merriwa. The aircraft's wreckage was located two days later on top of a ridge, 3880 ft above mean sea level (AMSL) slightly to the left of the direct track between Walgett and Merriwa.

The Australian Transport Safety Board (ATSB) investigation found that the Piper Archer collided with trees during a right turn, at a rate of descent of about 2500 ft/min.

A post impact fire consumed the cabin and fuselage immediately behind the cabin. The pilot

and passenger escaped the wreckage; however, the pilot died from his injuries before rescuers could get to the accident site.

The pilot held a private pilot license for airplanes and a commercial helicopter license, together with a valid medical certificate. He did not hold an instrument rating and the aircraft was not approved for IMC.

Reports at the time of the accident indicated that the cloud base was 3600 ft AMSL, and that cloud was covering the ridge where the wreckage was found. The weather over lower terrain to the southwest of the accident site was suitable for VFR flight.

Once the aircraft entered cloud, the pilot was no longer able to rely on external visual references, and most likely became spatially disoriented.

Investigators noted that the pressure the pilot felt to complete the flight might have influenced him into choosing the shortest direct route over high terrain, with associated poor visibility, rather than the longer route further to the southwest, where clearer conditions prevailed.

Decisions, decisions

Just how different decision-making patterns affect safety was the subject of a recent ATSB report.

Three weather-related decision-making behaviors were compared: VFR pilots flying into IMC; a weather-related precautionary landing; and significant weather avoidance action.

The results suggest that the mid-point of the flight can be a 'psychological turning point' for pilots, regardless of the flight distance involved.

The VFR into IMC group had the greatest risk of a fatality or serious injury, while the 'precautionary landing' group had the greatest risk of some form of aircraft damage.

The chance of a VFR into IMC encounter increased as the flight progressed, until it reached a peak during the final 20 per cent of the flight distance. The results highlight the danger of pilots 'pressing on' to reach their destination.

A VFR pilot may exhibit a range of behaviors when faced with adverse weather. For example, at the first hint that conditions are deteriorating, a pilot may decide to immediately return to the point of departure.

At the other extreme, a pilot may 'press on' into deteriorating weather, either unable or unwilling to see the increasing danger of their actions, until the aircraft suddenly enters IMC.

A more typical scenario might involve a pilot who, in response to deteriorating conditions, initially continues the flight as planned, but later decides to return, divert, or perhaps even carry out a precautionary landing.

Chance can play a big part in the outcome as the following two accident case histories illustrate:

In case 1, the aircraft was on a private flight from Shepparton to Moorabbin with the pilot and three passengers on board. Before departing from Shepparton, the pilot had obtained an enroute weather forecast that indicated that VFR flight via the Kilmore gap was possible but that conditions were likely to be marginal.

On departure from Shepparton, there was scattered cloud at 2500 ft with a ceiling of approximately 4000 ft. Visibility was about eight km, with occasional rain showers.

As the flight approached Mangalore, the hills to the east and southwest were shrouded in low stratus. Abeam Seymour, the weather ahead

appeared to be closing in so the pilot began a left turn onto a reciprocal heading for Mangalore.

However, the weather had closed in from behind, and soon after completing the turn the aircraft was enveloped in cloud. The pilot contacted Melbourne ATC and reported that he was in cloud with nil visibility. ATC advised him to concentrate on keeping the wings level, and provided radar vectors to ensure that the aircraft remained clear of high terrain in the vicinity.

Abeam Mangalore the aircraft broke free of cloud and the pilot was able to resume navigation. The flight continued to Shepparton and a safe landing.

This pilot emerged unscathed from a VFR into IMC incident because—luckily—advice and guidance were at hand.

In contrast, the pilot involved in the next accident, while initially slow to recognize deteriorating weather, made a wise decision to carry out a precautionary landing.

In spite of this, the aircraft was destroyed and the pilot and one of his passengers were injured.

The planned flight was from Bendigo to Albury. The area forecast indicated that the weather enroute would be okay for VFR flight. A cold front was moving slowly through the region from the southwest, but was not forecast to reach the area of the planned route until after the flight. The pilot did not hold an instrument rating but had completed three hours of instrument flight training.

The aircraft departed Bendigo at 11 am with the pilot, his wife, and their two children on board. It soon became clear that the front was moving much more quickly than forecast and that the weather along the planned route could deteriorate below that required for VFR flight. The pilot decided to return to Bendigo and told ATC of his intentions.

A short time later the pilot again contacted ATC and advised that the weather had deteriorated further and that he was going to carry out a precautionary landing in the Rushworth area.

The pilot identified a suitable landing area and carried out a low speed pass to confirm the area was free of obstacles. He configured the aircraft for a precautionary landing and made a slow-speed approach to the field.

Just after touchdown the nose gear hit the bank of a ditch that was hidden by reeds and long grass. The nose gear was sheared off, and the aircraft continued for some distance before it overturned and came to rest.

The pilot and the front-seat passenger were restrained by their lap-sash seat belts, but the pilot suffered a fracture to his left arm. One of the passengers in the rear of the aircraft received minor injuries.

What happens when you enter cloud?

Our normal environment is with two feet planted firmly on the earth, clear vision of our surroundings, gravity allowing us to feel weight/pressure on our feet (with a force of 1 g), and our inner ears providing our sense of balance.

Orientation is achieved with 80 per cent of the input to your brain coming from your eyes (external visual references) and 20 per cent split between your inner ear and proprioceptive system (seat of the pants or what you feel).

When you are flying you are operating in an unnatural environment that can result in different forces.

Usually it is easy to orient yourself in VFR flight. You have visual reference to a horizon outside the aircraft, and in steady flight you only have a force of 1 g acting on you. Even pulling 2 g in a steep turn is usually not a problem as long as you can see a horizon to maintain orientation.

But when a VFR pilot enters cloud, the horizon disappears. Suddenly, 80 per cent of the input you need for orientation is lost. Worse, if your flight attitude changes, or you make any maneuver that results in forces of more than 1 g, your sense of balance will also change.

Spatial illusions and disorientation are created when the fluid of the inner ear responds to acceleration, deceleration, pitch, roll and yaw. It is very easy to find yourself in a gradual turn once you have lost the horizon. Your inner ears will simply not detect the change.

Even after a minor distraction in the cockpit, you can find that when you look back at the artificial horizon that there has been a slow, 10 or 15-degree bank angle introduced. You make control inputs to correct the turn. But without a view of the horizon you will be relying on your sense of balance provided by your inner ears. The problem is that the acceleration forces affect the fluids in your inner ears resulting in a sensation of turning in the opposite direction.

To overcome this illusion you might make a correction back to the original position. While this may feel better to you, the original turn has been reintroduced with the airspeed increasing and the altimeter unwinding rapidly.

The illusions can be so strong that many pilots will disregard their instruments, certain that they're wrong.

There is a simple way to demonstrate what it feels like to experience a slight disorientation or dizziness similar to the illusions that may happen in a cockpit in cloud. Sit on a swivel once chair and tuck you feet under the seat of the chair. Close your eyes and place your head forward so your chin touches your chest. Hold onto the seat so you don't fall off and get someone to spin you around on the chair for 3 or 4 rotations (it doesn't have to be very fast).

Then lift your head up straight and open your eyes. You will feel a slight dizziness as the movement of the fluid in the inner ear was moved into another rotational plane when you moved your head. This is different to what your eyes were telling you.

If you are VFR and you find yourself in IMC you need to ignore your senses, and follow your instruments. Seek help from ATC if you can. And try to remain calm.

Some general principles of instrument flying need to be understood and followed:

- Trust the instruments and believe what they are telling you.
- Maintain a scan of the instruments.
- Do not dwell on one instrument for too long, and check the attitude indicator after you check any other instrument.
- Use smooth and gentle control inputs to get the aircraft to do what you want.

One of the keys to avoiding a VFR into IMC incident is to be able to recognize deterioration in the weather while there is still time to make a safe diversion. This is often easier said than done, but there is evidence that in-flight, weather-related decision-making can be practiced and learned.

Research by the US Federal Aviation Administration has found that experienced pilots generally use the following indicators to assess in-flight weather changes:

- Lowering cloud base.
- Rising terrain.

- Darkening clouds.
- Increasing cloud cover.
- Reducing visibility.
- Rain showers.
- Changes in wind direction and speed.

A change in three or more indicators was sufficient for the experienced pilot to initiate a diversion to an alternate or a return to the departure aerodrome.

You should monitor the weather behind your aircraft. There is no point deciding to turn back to find that the weather behind the aircraft is as bad as it is in front—or worse.

Always give yourself time to make informed decisions. If the weather appears to be getting worse, slow the aircraft down (use flaps and lower the gear). The slower speed will usually improve your forward visibility and give you more decision making time. It will also reduce your turning radius if you have to maneuver in a tight space.

The safest thing to do is to cancel a flight if the conditions look like they might become marginal. But it can be a difficult decision because you might have a lot of time and effort invested in the flight, and there may be friends and family counting on you.

Remember, your primary responsibility is your safety and the safety of your passengers.

Preparation: The key, of course, is to avoid deteriorating weather or IMC in the planning phase. Thorough weather planning and an extensive understanding of weather forecasts and meteorological conditions help pilots determine whether the weather is acceptable for VFR flight.

The weather on the TV usually gives a satellite image and a surface chart. Get to know what they mean and use them to check the weather around you even when not flying to give you an indication of how frontal passages and cloud bands evolve.

However, when you do commit to going flying make sure you get the relevant aviation forecasts you need and update them through FLIGHTWATCH.

You can also call ahead to your destination to find out actual weather or check with ATC to hear from pilots flying along the route.

When you are planning to take others on a private flight, make sure they understand the importance of the weather conditions, and tell them that you will cancel plans if the weather is not suitable. If someone has to be home by a certain time, make sure they understand this might not be possible.

Preparation is the key. Have the current maps and charts to ensure you have the latest information about airports, NAVAIDS and facilities available, including ATC frequencies.

Learn how to obtain weather and NOTAM information, and always submit a flight plan. Use ATC flight following services enroute. Call FLIGHTWATCH for updates of weather reports. And remember to always set the altimeter within 100 nm of the position of your aircraft to ensure you are flying an accurate height.

It all comes down to thorough preparation, alternate plans and timely decision-making. And decisions have to be constantly reassessed based on the current situation—looking and planning ahead is essential. Problems occur when pilots fail to make a decision. It’s vital that you constantly consider your options and that you are prepared to act swiftly.

Think could I get through there—have I got an escape route? It’s okay to turn around. It’s okay to consider that I won’t make my destination.

It comes down to thorough preparation, a range of alternate plans and timely decision-making.

Available from our Members

Garmin color GPSmap 295
Vern Sprague has a new GPS Garmin 295 for sale. Value $360. Phone 360-683-7571
dollyvern@olypen.com

Sky Raider Kit for sale
Mel Rudin writes:
Bill Hancock was one of the early members of 430. He was building the Sky Raider for his personal fun plane. Unfortunately he died before he was able to complete the project. His widow, Sylvia, would like to get the use of her garage back; consequently she would like to find a good home for the project.

The Sky Raider is a single place, high wing, tail dragger that looks like a small Piper Cub. The fuselage is steel tube with aluminum longerons. The wing has two aluminum spars with wood ribs. All framing construction is complete; and all fabric and finishing components are stored with the kit. What remains to be completed is the cabin floor, instrument panel, selection of instruments and an engine with accessories. The engine that is currently with the kit is a Rotax 277. It is out of production. The best option is a Rotax 477 which is in production and was a recommended option for the kit.

I will be glad to take any interested parties over to see the project. Sylvia doesn't want a crowd so we'll do it in 2s and 3s. Contact Mel Rudin at rudin@olypen.com

Aircraft hangars for sale at the Port Angeles Airport. Newer, well built. Now just $31,000 each. Call for brochure or more information. Alan Barnard, Windermere 360-461-0175

Large T Hangar for rent at Diamond Point Airport. $200.00/month.
George Llewellyn 360-477-8180

Lancair 235, O-235 LCE2 engine, aircraft 275 hrs since new & SMOH, hangared in Port Angeles. All electric instruments; no vacuum pump. Wooden cruise prop. A good airplane that cruises at 156 kts on 6.5 gallons per hour. 32 gallon fuel. Contact Bill Bartlett for more information at wtbartlett@msn.com

EAA CHAP. 430 Monthly Meeting Minutes

Date: November 19,2016 at Hangar 15 SVA
Meeting called to order at 10:00 AM by President Dave Moffitt
followed by the flag salute
New Members: Stan Tomich and Robert Fuller
Communications: We have made a filing with the state to change wording of our corporate filing to accommodate the IRS requirement regarding final distribution of assets should the chapter dissolve.

Minutes of last meeting stand approved
Treasurers Report: Treasurer not present
Projects: Stan Tomich is working on his KitFox kit he has recently acquired. Ernie Hansen is progressing on his exp. super cub at Diamond Point. It is reported that Jim Bettcher is on his way back from Tenn. with a Glass Star.
Membership: Bob Hicks not present, but we have the 2 new members
Activities: Holiday party coming up December 3 at 5:00 Cedars at Dungeness Golf Club and we will have Toys for Tots plus Santa! Tickets $30 with choice of meals.
Young Eagles: No current activity but a presentation was made to the PA Kiwanas Club as they were unaware of the Y.E.
Tech: None
Scholarship: None
Old Business: 501(c)3 awaiting IRS response. Election of new officers: Pres. M. Radford, VP Jim Rosenbrugh, Sec. K. Brown, and treasurer Harry Cook.
Dan Donavon moved to close nominations. All nominations accepted by unanimous vote. Scott Brooksby is offering a ground school 5-7 pm Tuesday and Thursday, call him if interested.
New Business: Coffee will be provided by Mary Kuntz that will be brewed by same and not purchased from Starbucks. Donat-ions still accepted!
Meeting Adjourned: 10:20 followed by Jim Rosenburgh's Flying to Canada presentation, procedures to accomplish same. very informative, good job Jim!

Respectfully submitted,
Norm Coote
Secretary

27 signed in for attendance

Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website:
http://www.eaa430.org/users_LogIn.php?accesscheck=%2Fusers_Profile.php

If you are a chapter member and do not yet have a login to the Members page, you can register with your email address to create a login, at http://www.eaa430.org/users_Registration.php

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Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

A Little Hangar Flying: Always Have a Plan, and Use Good Judgment at All Times

Flying to Chandelar Lake in the Brooks Range, Alaska in a DHC-2 on Floats

I started my flying in Alaska. One thing about Alaska Flying is most of the time you're flying, you're on your own. No one around to see or care about what you are doing or going to do. You're on your own to make decisions and make the correct ones. It's darn quiet on the radios.

The FAA said training for judgment is one of the hardest things to do. The problem with most aviation accidents is that often times the accident can be attributed to poor judgment. That's the reason The Gold Medallion Program was developed.

The Alaska Airman's Association got a simulator all decked out with the latest GPS terrain data available. They took the simulator across Alaska training the Air Taxi Pilots and anyone else who they could hold still for a bit. They put Pilots into situations where they had to make critical decisions. If they pushed into the weather too far they were given further instruction. The Airman's Assoc. was training pilots how to use good judgment and reinforcing the correct decisions. By participating, the Air Taxi Companies got a Gold Medallion Plaque for the wall in the passenger check-in area for everyone to see.

The other hard thing to do is execute a "Go Around" prior to landing. We could train for that on our check rides and reinforce the action right at the moment. But turning around and the long flight back is REAL hard. Here's why: you are going to second guess your decision all the way home. What's my boss going to say? (your boss pays you to make correct decisions.) What are the passengers thinking? (The passengers are on vacation, RIGHT? They want to vacation, not die.) Or what are the guys at the other end you were going to pick up, and are out of food thinking? (The guys were hunting; they get to hunt harder and longer.)

The turn around

I developed a really good way to deal with that: "Hey folks, we turned around because the weather is getting worse. Mean ol' Mother Nature is keeping us from our destination." (I diverted the reason to Mother Nature). "We'll try later when the weather is better."

Remember, flying is fun, and when my palms are sweating and my mouth is dry and I'm leaning forward 6 inches to see further out the front window or the side window because I can't see out the front, Guys, it ain't fun no more… It's time to turn around! Do it! Don't wait! Where you came from is good, You just came from VFR. TURN AROUND NOW!

One other thing. You must stay focused on what you are doing at all times. Remember the old

saying? Flying is unforgiving.. We airline guys always say, a well planned approach is a small price to pay when the alternative is a smoking hole in the ground.

Have a Plan

Always have a plan, but be flexible. Always have an out. Fly like your family is with you at all times. Don't have your "personal" minimums when flying alone, then use FAR Regulation minimums when others are flying with you. You owe it to everyone around you to plan and do the right thing at all times. Why on Earth would you jeopardize yourself in a situation, but not with your wife with you? If you continue breaking the regs, you *will* one day have a really bad day.

A year or so ago I had a load of guys in the airplane and we had just eaten lunch at the Spruce Goose in Port Townsend. We all piled in the airplane and taxied out. Lots of distractions as usual…lots of laughing, talking, jokes, etc. But when it comes to flying I hold up my hand and the laughter stops.

I'm getting close to the runway for departure. I looked at the fuel indicators…guess what? The fuel indicator is just above the "Red Zone" or in the red zone. The fuel was bouncing around in the tank and I couldn't really tell if the fuel was above the line where it says: "Don't Take Off" or not. Ah heck, I thought to myself, you could try and justify the situation and say, its only a 10-minute flight to Sequim.

Nope…I haven't taken off like that yet and and I don't care if I look like a fool for not getting gas before I taxied out. I'll look like a bigger fool if I survive the engine failure due to too much air in my fuel tanks. Then, if I do survive the guys will probably kill me. So I told everyone we have to go back and get some gas.

We taxied back to refueled. We had a great flight back. We got to fly all over the place with no worries about the fuel. Not a word was said. In fact, they helped me refuel.

I mention this because we have had two water landings this year and one land crash a couple of years ago. All the airplanes left the airport where fuel was available; the land plane flew by at least ten airports with fuel, supposedly to get home where he had cheaper fuel. All fuel mismanagement accidents. Fortunately no one was really hurt bad.

There is absolutely no excuse for leaving a refuel station without more than enough fuel to make it to destination and back or to your alternate. There's FAR's that cover this. I don't care how much fuel costs when I'm out of fuel.

I was in Port Allsworth, AK. last year on floats with fishing buddies and my son. I tanked up the airplane at 8.00 a gallon. Expensive!!!! Heck ya!! But you know what? I had to turn around in the pass and go all the way back and spend the night. In 36 years of flying that pass I never got into that situation. But I was prepared for it when I did. We didn't like it much, cause Don really snores bad, but flying in the mountains with less than a mile visibility is not cool or fun. We had a great breakfast and flew out no problem the next day. The Lodge also froze our fish solid for us.

Oh! I fueled up again before I left. Now what kind of an example would I be if I hadn't taken more than I needed on the fuel? That was some expensive fish I tell you, but we are here to talk about it and we didn't interrupt anyone's evening looking for a plane that crashed in Lake Clark Pass.

Fly Safe everyone and be careful.

Mike Radford

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Tech Counselor & Flight Advisor	Jim Cone	775-0311
Tech Counselor	Dan Masys	797-3260
Raffle	David Orr	670-9725
Communications: website and newsletter	Dan Masys	797-3260
Membership	Bob Hicks	452-9399
Merchandise	John Meyers	477-1354
Young Eagles	John Meyers	477-1354
Scholarship	Dave Miller	452-7136

*Phones area code 360 unless otherwise noted

On the Horizon: Calendar of Events

EAA Chapter 430 meets on the last Saturday of the month, in Hangar 10 at Sequim Valley Airport at 10:00 a.m. For directions and additional information about chapter programs, see the chapter website: http://www.eaa430.org

Date	Topic
Monthly Chapter meeting February 18 10:00 a.m. Hangar 10 Sequim Valley airport	Keith McMinn will talk about his experience flying US Air Force C-17 missions to Antarctica.
Saturday and Sunday February 25-26, 2017	The Northwest Aviation Conference & Trade Show Washington State Fair Events Center Puyallup, WA
Monthly Chapter meeting March 25, 2017 10:00 a.m. Hangar 10 Sequim Valley airport	Mike Lavelle will survey air racing events from pre-World War I to the eve of World War II. Air Race promoters attracted large crowds and international media attention despite the Depression. Having an air race enhanced the reputations of host cities. The economics of these events benefited aircraft engineers, manufacturers, pilots and their aircraft. The Bendix, Thompson and Schneider Trophy's became world famous and prized possessions. The National Air Races were a highlight of a troubled time. The presentation will discuss the role the air races played to

	enhance aviation awareness in the United States during this period of pre-world War II aircraft design and development.

Volunteer Pilots Needed!!!

By Alan Barnard
Clallam County Aviation Coordinator for Emergency Management

CLALLAM COUNTY EMERGENCY MANAGEMENT
DISASTER AIRLIFT RESPONSE TEAM
UNDER DEVELOPMENT

Attention all local Clallam County private pilots who own airplanes. I am in the process of reviving an effort I previously embarked upon several years ago but could not complete due to issues with the State DOT. I am working with an excellent disaster relief program for volunteer private pilots that is run by volunteers and will assist County disaster relief activities in the event of a major event such as an earthquake or tsunami. This is nothing short of a major life saving program and we need your involvement.

We are implementing a program developed in California some years ago called a **DARP** or **D**isaster **A**irlift **R**esponse **P**rogram. To carry out a DARP program we establish a **DART** or **D**isaster **A**irlift **R**esponse **T**eam. (Sorry for the acronyms but you are pilots and should be used that by now.) This is where you come in.

There are several DART's operating in California and similar programs have assisted many large scale earthquake and weather related disasters. The beauty of establishing a DART is that in time of need, if our local pilots are overwhelmed, we can request assistance from other DARTs from other areas and they can respond using the same procedures and plans that we have to we can all work together quickly and efficiently.

We are the first jurisdiction in Washington State to organize a DART and DARP and will be leading the way for other jurisdictions to follow when we have successfully implemented ours. This critical component to save lives and assist in multiple ways our friends and neighbors to survive a major event depends on your willingness to get involved.

To kick this off, we are having a special presentation just for local volunteer pilots on Tuesday, March 28th at 1:00 pm in the Emergency Operations Room on the lower floor of the Clallam County Courthouse. I will be outlining this program and how you can get involved along with a gentleman whose name is aptly Sky Terry who has many years' experience in this field and has established Disaster Relief plans for the Seaplane Pilots who have their own distinct and unique considerations. He will give some history of these programs and share his experiences as to how they operate and how crucial they are to helping as many as possible survive in a critical time of need.

Make no mistake about it. The time will come where emergency preparedness will be all that matters for a period of time and you have the opportunity to do what only you can do.

You will be asked to do just what you are trained to do, fly your airplanes to and from designated locations for missions such as:

- Transfer of displaced persons
- Area recon
- Food airlifts
- Move emergency workers
- Move ambulatory medical patients
- Other duties as assigned.

There are a lot of details as to how we form this and how you get involved along with establishing subgroups consisting of rotary wing, seaplanes and fixed wing, etc. This will be covered in detail at this presentation. And yes….more acronyms…lots more acronyms to come but I will pass those along judiciously over time. You'll love it.

One last thing: I need leadership for this program to function. I am looking for a Chairman and Vice Chairman and some other positions yet to be determined to get involved from the beginning and who will be in charge of mobilizing this program in time of need. It is a commitment to your community and we need dedicated leaders. If you are willing to help and take a leadership role, please call me and let's talk about it. I need your commitment as soon as possible. Thanks in advance for your willingness to get involved!

Please email me at abarnard@olypen.com to let me know that you will be attending so we will have the set up ready. If you have more questions you can call me at 360-461-0175.

PLEASE PLAN TO BE THERE AND TO GET INVOLVED. LIVES ARE AT STAKE AND YOU HAVE A HUGE PART TO PLAY IN SAVING THEM. IT'S NOT A MATTER OF IF BUT WHEN!

Alan

BasicMed: What is a covered aircraft?

From AOPA ePilot News, February 9, 2107

Under third class medical reform, now known as BasicMed, pilots flying covered aircraft and meeting certain requirements will have the option of using BasicMed in lieu of a third class medical certificate. The new rules take effect May 1 of this year.

It is important to note that BasicMed is not limited to aircraft in the airplane category. Any aircraft that has a maximum certificated takeoff weight of 6,000 pounds or less and is not authorized by federal law to carry more than six occupants can be operated under BasicMed per 14 CFR 61.113(i)(1). There are no limits on horsepower, number of engines, or gear type. However, compliance with the maximum occupant rule is not as simple as confirming the aircraft has six seats or fewer installed.

Some aircraft are authorized to have either six, or more than six seats installed per the type certificate data sheet (TC). One example is the Piper Cherokee 6 (PA-32-300). The TC for this airplane authorizes it to have either six or seven seats installed. Since it is authorized to have seven occupants, it does not meet the BasicMed requirements, even if only six seats are presently installed.

The FAA does allow that an aircraft can receive a supplemental type certificate (STC) or an amended type certificate (ATC) to reduce the maximum number of authorized seats to six or fewer. See Advisory Circular 68-1. If the new design approval authorizes no more than six seats, then it will conform with the BasicMed requirements. Similarly, an aircraft that was originally certificated with a maximum certificated takeoff weight greater than 6,000 pounds can receive a new design approval authorizing a maximum certificated takeoff weight of 6,000 pounds or below.

Experimental aircraft also may be flown under BasicMed. Rather than having a TC, experimental aircraft are issued a special airworthiness certificate. Nevertheless, the same restrictions apply. If the experimental aircraft was authorized with a maximum certificated takeoff weight above 6,000 pounds, the design approval would have to be modified to a maximum of 6,000 pounds or less before it could be flown under BasicMed.

BasicMed also restricts pilots to operating no faster than 250 KIAS and no higher than 18,000 feet msl per 14 CFR 61.113(i)(2). However, these restrictions do not relate to the operating limitations of the aircraft. It is permissible to fly an aircraft under BasicMed that is capable of flying faster and/or higher than those limits as long as the aircraft can be safely flown within them, and as long as the flight is conducted according to the regulations.

Chad Mayer
AOPA Legal Services Attorney

And for those flying with a current third class medical, a key question about BasicMed answered:

Q: I've had a standard third class medical exam within the past four years – could it count as the BasicMed exam?

A. No. The BasicMed regulations require an exam by a state licensed physician performed in accordance with the new rules, and the completion of the medical examination checklist. The items on the checklist are different than those for the current third class medical certificate, so a new exam by a physician (not necessarily an Aviation Medical Examiner) is required. Your previous third class medical exam will not meet the requirement for the physical exam.

Available from our Members

Garmin color GPSmap 295
Vern Sprague has a new GPS Garmin 295 for sale. Value $360. Phone 360-683-7571
dollyvern@olypen.com

Sky Raider Kit for sale
Mel Rudin writes:
Bill Hancock was one of the early members of 430. He was building the Sky Raider for his personal fun plane. Unfortunately he died before he was able to complete the project. His widow, Sylvia, would like to get the use of her garage back; consequently she would like to find a good home for the project.

The Sky Raider is a single place, high wing, tail dragger that looks like a small Piper Cub. The fuselage is steel tube with aluminum longerons. The wing has two aluminum spars with wood ribs. All framing construction is complete; and all fabric and finishing components are stored with the kit. What remains to be completed is the cabin floor, instrument panel, selection of instruments and an engine with accessories. The engine that is currently with the kit is a Rotax 277. It is out of production. The best option is a Rotax 477 which is in production and was a recommended option for the kit.

I will be glad to take any interested parties over to see the project. Sylvia doesn't want a crowd so we'll do it in 2s and 3s. Contact Mel Rudin at rudin@olypen.com

Aircraft hangars for sale at the Port Angeles Airport. Newer, well built. Now just $31,000 each. Call for brochure or more information. Alan Barnard, Windermere 360-461-0175

Large T Hangar for rent at Diamond Point Airport. $200.00/month.
George Llewellyn 360-477-8180

Lancair 235, O-235 LCE2 engine, aircraft 275 hrs since new & SMOH, hangared in Port Angeles. All electric instruments; no vacuum pump. Wooden cruise prop. A good airplane that cruises at 156 kts on 6.5 gallons per hour. 32 gallon fuel. Contact Bill Bartlett for more information at wtbartlett@msn.com

EAA Chapter 430 Membership Meeting Minutes

Date: January 28, 2017
Call to Order 1005_ Location: W28 Hangar #10
Officers: President ☑ Vice President ☑ Secretary ☑ Treasurer: ☑ ⊗ ☑
Events ☑ Membership ☑ Newsletter ☑ PP Raffle Scholarship Web ☑ YE ☑

Agenda:

- Call the meeting to order at 10:05 by President Mike Radford
- Introduction of Guests.
  3 guests were introduced by John Meyer:
  - Maria Sallee, Duane Beland, Brian Wittaker
- Approve Minutes:
  - Revisions/Corrections Approved. No corrections
- Chapter Project: (members open forum)
  - Harry Cook - Pacer project nearing engine start.
  - Jim Rosenburgh - Tetrahedron report – waiting for good weather (50+ degrees) for paint. All supplies are on hand.
- Reports:
  - Correspondence: None
  - Treasurer: Harry Cook
    - Checking $897.
    - Savings $1182.
    - Scholarship $4903.
  - Membership: Bob Hicks reported two new members this month. 84 total on rolls. Reminder to new members to see Bob Hicks for your membership badges. Signed in at meeting 33 plus guests.

- Tech counselor report: Dan Masys discussed Slick & Bendix mags inspection and suggested viewing Mike Busch's December 2016 EAA Webinar on "All About Magnetos", at https://www.youtube.com/watch?v=cOr3b10zmrQ
- Scholarship: Dave Miller no report
- Young Eagle: John Meyer nothing to report
- Merchandise: John Meyer nothing to report
- Programs / Activities: Paul Kuntz no report
- Newsletter / Web: Dan Masys nothing to report

- New Business:

Next month's meeting (2/18) is being moved up by one week to allow the membership to attend the Northwest Aviation and Trade Show in Puyallup WA on 2/28-29 at the State Fair grounds. (Free parking Admission is $5.00)

- Close of the business meeting
- Break – Coffee – conversation
- Resume social meeting for the presentation

Andy Sallee presented an overview and future projection on the Sequim Valley Airport.

Highlights: Currently a master plan for airport development is near completion. This tool is to be used to request grant funding from the State to improve the runway and taxiways, lighting, and identification markings (hold short lines). Question was asked if there was any consideration for any visual slope identification system. Andy said it was on the list. There is a current plan to replace the underground fuel tank with an above ground unit. Funding has been secured for this project. Environmental concerns for the underground 30-year-old tank are requiring additional and time-consuming inspections. Andy also showed slides of future plans to replace the trailer office with a permanent building and café/meeting area.

Emily Westcott gave an overview of the upcoming AirAffaire the last weekend in August and pointed out this year is also being billed as a FLY-IN in order to attract more airplanes.

A very short discussion on the aerobatic box north of the Sequim and Port Angeles shoreline. Still in the process of development.

Meeting adjourned at 1125

Overlooked at the general meeting was the mention of the generous donation by CCPA of $1500 for the Scholarship fund. Thank you CCPA board and membership!

Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website:
http://www.eaa430.org/users_LogIn.php?accesscheck=%2Fusers_Profile.php

If you are a chapter member and do not yet have a login to the Members page, you can register with your email address to create a login, at http://www.eaa430.org/users_Registration.php

Newsletter & Website SPONSORS

EAA 430 Flyer

Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

A Little Hangar Flying: Getting There is Half the Fun and New Runways

Can't let the clients get their feet wet!

Getting there is half the Fun!

Here is my First Landing in the Skewentna Canyon "Cable" Crossing. Cable???? Where's the cable??? One way in, One way out!!! Land up river, takeoff downriver.

This place is a special checkout. (I didn't get a check out. I checked myself out). Note: I was authorized to go anywhere in the State. Not for the faint of heart as one new pilot exclaimed!

The water is moving at the drop off point so fast there is no coming off the step and shutting down until you are abeam the place the guys standing in the water can catch you. When you get ready to go you start the engine, you have to be ready to get turned out into the current, flaps at Take-off, water rudders down, nod your head with eye contact with guys standing water, start engine, the guys release you into the current as the prop turns, left turn down the river turning, adding full power, pulling water rudders up and on the step, accelerate, roll a float, lift off level off and accelerate pumping the flaps up to climb flaps… slowly. Do that four times a day. Ha!

Did I say there is a 200-foot rock cliff in front of you about three beaver lengths ahead in the turn!!!

Had to land on Puntilla Lake, Rainy Pass Lodge Summer Strip. The Lake had severe water overflow on top of the ice.

Stop short, unload and takeoff straight ahead. Perfect planning.

New Runways

Any where, any time you go to a new or unfamiliar runway it's a good idea to check out the area and brief yourself. I always ask someone who has been there if there is anything special about the airport as part of briefing myself. Sequim Valley has trees on the East end that are in the path of the runway. Diamond Point is narrow and has severe downdrafts in windy conditions. It's really busy at Harvey Field. Ha! South Whidbey or Langley is nestled in the trees and very narrow and is one way in to the North out to the South, since there are 150 foot trees to the North.

If you can't find anyone who has been to the new place recently, find out as much as you can before you launch. Some things to use to help brief yourself are MAPS. Yes! Maps!! Those are paper things we used before the EFIS Electrical moving maps and GPS's came out.

Many times during my flying career in Alaska, and around the world, I got tasked to go to places no one had ever been. Most of my time in Alaska there wasn't a runway, never was a runway and never gonna be a runway. Sometimes I found myself in places that I had only myself to figure out what to do and make good safe decisions.

One time in the 747, in the middle of the night when everyone was tired, the Russians just turned off the radio beacons we were going to use to make the approach to landing. The Co-pilot was frozen up and the Flight Engineer was just finishing up the LA times. We had to land. We were out of fuel.

When I come to a new place or even a place I have been to four times that day I always look over the Lake, River, Strip or Sand Bar and figure how to get in and get out. As an example, an airplane on floats can land in a lake you can not get out of. Make sure you have a way out. One time a client gave me coordinates to the wrong place. The weather was low and raining. I knew the area really well. I knew there were not any cabins on the lake with coordinates that I was given. But the cabin wasn't on the lake proper. The cabin was in the woods, some ways from the lake. Still I landed only after I knew I could get out of the lake. No one was there so I went to another lake nearby and sure enough, there he was. Thing is, I had landed at the other lake. I was told there was a four wheeler under a blue tarp. There was a blue tarp on the wrong lake in the proper place too. How does that happen? He was glad to see me -- big smile as he climbed in and off we went.

I had one time landed at a small lake up around Galena, Alaska, near the Yukon river. This client had read a book about how good the Arctic Grayling fishing was and chartered us to take him there. No one had ever been there. (I found out later). Ha! The lake was a Cub (ie., PA-18) lake not really a Beaver Lake… The guy that wrote the book just said there was a lake there and you land at the lake and portage your gear to the creek. Simple, huh? Crazy Alaskans.

I told the client, if I land, you're going down the river cause you're not getting back in the airplane to fly out. Even in the Beaver it was almost too short for my weight and performance. I used the whole short lake to get off. Oh, and it was so small there was no chance of a Step Turn Takeoff -- a highly skilled technique used in short lakes.

Good thing about the Tundra is, there are NO TREES to climb over. Not to mention the wind was blowing really good. How much did I make it out of there by? Well, if I had forgotten to bring the water rudders up I would have hit them on the tundra on departure.

Another pilot friend of mine went to a lake to land and kick some guys out that were going to kayak down the Happy River in the Alaska

Range. Stu the pilot tells the kayakers, "If I land, you're going down the river to get home." There's a cabin on the lake – a small warm up cabin. Long time Alaska Big Game Guide "Bucky" owns the cabin. Bucky was there at the time. Stu lands and kicks the guys out. Bucky is standing there on the lake shore drinking a cup of coffee. Stu asks him if there was a problem with him landing here. "NOPE" says Bucky, "I came out cause I couldn't believe my ears when I heard your airplane overhead getting ready to land. No one ever has landed here. I just came out because I wanted to see if your going to make it in and out in one piece. The lake water level is the highest its ever been." At the time Bucky had been The Hunting Guide in the area for 50+ years. Ha-ha, now they go in by helicopter… does that tell ya anything?

The guys kayaked the river which was a first. Stu had looked it over really well before committing. But still it was a less than marginal operation, even though Stu was a highly skilled Alaskan Bush Pilot.

On skis you can land on lakes that are so rough they can rip your gear off. You have to look things over. The midday "Flat Light" can get you in real trouble. Saw a crash at Puntilla Lake by an Air Taxi pilot, during one Iditarod. The wind-driven snow bumps literally ripped the gear off the C-185. Ending up cartwheeling the airplane. Everyone was ok, but the runway was 100 yards away. He didn't look the place over very well or he would have seen it. That goes for runways or no runways.

The snow can be sticky; when it is sticky you can get stopped but can't takeoff. Or the snow can be the consistency of sugar, with No Bottom; you sink out of sight. Next thing you know you're up to the wings in snow. Seen it happen. Ha, we threw out supplies (which is to say beer) to the guy that landed there. Bad part about the throwing out supplies…the supplies went through the snow to the lake ice below and skidded along the ice. They tied red Surveyors tape to the beer but it was real hard to find. He had to pack a runway with snow shoes and let it set up overnight to get out the next day. So there are hazards you may not know about or see. Be careful wherever you go and don't take anything for granted.

On wheels it's almost the same as skis. The runway from the air looks smooth but may not be. Look it over from different angles.

Oh, and if it is a RUNWAY, "RUNWAYS" have numbers on them. If it doesn't have NUMBERS on it, two things: it's not a runway, it's a landing strip; OR it's a taxiway. Someone we all know just did that! His initials are Harrison Ford -- a pretty good pilot.

If the landing strip is short, its wise to practice a few landings at your landing weight and be able to touch down where you want. Accomplish that on a runway that is nice and long. Make a few full stop landings until you got it right. Remember, some places you only get one chance to get it right.

I see so many pilots landing half way down the runway. Remember the old saying? Things of no use to a pilot? One is runway behind you. That applies to landing also.

The wind is always hard to judge. Look for the wind sock on the field; it may be just a piece of tape tied to a tree. Use what is available, look OUTSIDE the cockpit to judge the wind when you are approaching the area. Look and see if there is smoke coming out of a chimney or wind on the water; both are a big help. Look at the trees, look at the tall grass, use anything that may help.

If you have a GPS look at the Ground Speed on approach: you will know if you have a tail wind or not on approach to the airport. If you have a tail wind, adjust your choice of the runway to use. Do like the birds do! Land into the wind. A 10,000-foot runway is short if you use the last

200 feet of it. Remember that! I have seen so many people use the down wind runway which is fine, but if there is a preferred runway at the airport and the other pilots are using that runway don't come in on the downwind runway between the other airplanes. If you're the only one around do what you want, but be careful.

If the runway is grass and its WET, it will take one and a half the normal distance to stop after your wheels contact the grass. Know your airplane performance parameters.

We also have a new President going to different places with Air Force One. Just the other day there were 7 violations and intercepts by F-16's of small airplanes going thru TFR's in Florida. There are some great flight planning Apps now for us to use. Almost(!!!!!!) taking the place of maps. Are your maps current in the plane????

Use everything at your disposal. These laptop, iPad apps for maps and navigation, etc. are great. One is Foreflight. A great thing about Foreflight is that before we go "commit aviation" we can pretty well brief ourselves. Find the TFR's and avoid them, or we can see who is the controlling agency and get permission thru the TFR by contacting that controlling agency before we get there, by use of a radio. Ask and get a squawk code. We can get the up to date weather, runway information, communication information, ATIS or AWOS. All kinds of information on these devices. Fly one trip around the USA and they are worth every penny.

I also still use current maps when I fly cross country. Yes, I use maps. I draw lines on them and my kids can see where we are and if there is anything cool to see out the window.

In Alaska and the Lower 48, I love my GPS. I have the whole State of Alaska Topographic uploaded in my Garmin 496. It doesn't really take the place of maps but it sure is nice to use when your down low flying and don't have the advantage of altitude. If I am coming in low due to weather I can find the general area where the runway, lake or creek are located. Many times it's low clouds but great visibility. Again I don't fly if I can't see. I'm VFR. I stay that way. If it gets so bad I turn around go back or land and wait out the weather. You can do that if your airplane is on floats. Wheels not so much. Except in the Lower 48 there are runways everywhere.

If you're on skis it's to darn cold to land and wait out the weather, unless you know of a lodge that has the coffee on. Which I do and they usually have cookies or brownies! They love the local Bush Pilot coming in and saying hello. The Lodge guests really love it. They get to see a Bush Pilot. It really is true: there are Old Pilots and Bold Pilots but no Old Bold Pilots.

One last thing if you're flying floats or a haul amphibious airplane. You looked the area over good. Looks long enough the wind is right, no rocks, no debris in the lake or river. In rivers, the debris you get in trouble with is up stream of your intended landing area. Why? Because the junk will be in your landing area soon. But something looks peculiar? The seagulls are standing on the water! What are you going to do? I'll say that again: the seagulls are standing on water and you can see their legs. That means the water is only an inch deep.

Fly safe. Always have plenty of fuel. Remember, an outstanding approach is a small price to pay when the alternative is a smoking hole in the ground!

A Superior Pilot is a Pilot who uses his superior knowledge to keep him out of situations where he has to use his superior skills.

Fly safe everyone and be careful.

Mike Radford

In This Issue

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*Phones area code 360 unless otherwise noted

On the Horizon: Calendar of Events

EAA Chapter 430 meets on the last Saturday of the month, in Hangar 10 at Sequim Valley Airport at 10:00 a.m. For directions and additional information about chapter programs, see the chapter website: http://www.eaa430.org

Date	Topic
Monthly Chapter meeting March 25, 2017 10:00 a.m. Hangar 10 Sequim Valley airport	John Fredrickson, a volunteer at the Boeing Archives, will talk about North American Aviation during WWII. His talk will emphasize some of the individual personalities involved in North American, and will cover the P-51, B-25 and AT-6, including mention of the only B-25 with Pratt & Whitney R2800 engine installation.
March 28, 2017 1:00 PM	Disaster Aviation Response Team meeting at Clallam County Courthouse, Port Angeles. All pilots invited. Contact Alan Barnard: abarnard@olypen.com
Monthly Chapter meeting April 29, 2017 10:00 a.m. Hangar 10 Sequim Valley airport	Program on National Air Races by Mike Lavelle (rescheduled from March meeting).
June 10, 2017 0830-1500	Chapter Fly-Out to Skagit/Bayview (KBVS) and Heritage Flight Museum. See February chapter meeting minutes below for details.

BasicMed for Flying to Canada?

From AvWeb 3/13/2017 by Russ Niles

AOPA President Mark Baker has written the aviation authorities of three countries whose airspace borders the U.S. asking that they accept new BasicMed medical requirements that will cover some private pilots. BasicMed goes into effect in May 1 and is expected to be adopted by many U.S. pilots but Canada, Mexico and the Bahamas don't have parallel regulations so BasicMed pilots will not be able to fly in those countries. "Many of our members continue to contact us hoping to visit the Bahamas under these new rules," Baker said in the letter to the Bahamian Ministry of Transport and Aviation. All three countries require an ICAO-recognized third class medical and BasicMed will not be approved by ICAO. Canada has a Category 4 medical that shares some of the features of BasicMed, including the family doctor declaration, but is much more restrictive in terms of aircraft type and operation. It is not recognized by the U.S. or ICAO.

Baker is appealing to the leading officials of the three countries to "officially recognize" BasicMed to allow holders to exercise their U.S. privileges on visits. While Baker doesn't ask the other jurisdictions to adopt a BasicMed system themselves, he does list its selling points. "The new law was enacted by Congress because it reduces costs, bureaucracy, and most importantly maintains safety," Baker wrote in the letter to Transport Canada.

Lycoming Rolls Back Prices On Engine Parts. A lot.

By Paul Bertorelli, March 12, 2017

With little fanfare, Lycoming has dramatically rolled back prices on major engine parts, including crankcases and crankshafts. The price reductions on some parts are as much as 70 percent, according to the company, and have reset overhaul decisions for many owners who may have unserviceable cranks or cases.

Heretofore, those replacement parts would have been drawn from the overhaul or repair pool and owners would have been charged accordingly. Now owners can opt for new crankcases and crankshafts at prices comparable to what they might have expected to pay for repaired parts.

Lycoming's Steve Palmatier said that the company routinely reviews production costs and selling prices on all of its parts and determined that it could boost parts sales by drastically reducing prices. One way they did this was to unbundle crankcase sales. The company once sold crankcases only as kits, which included such accessories as through bolts and spacers.

"A lot of shops don't want those parts," says Palmatier, so the company broke the package into discrete parts. Prices vary by part, but as an example, one case—an IO-360 with flat tappets—was dropped from $17,501.63 to $4979.65, a decrease of a whopping 72 percent.

These price decreases have already rippled through the industry. "Just overnight, the industry lost about a million dollars on that deal," says L.J. Warren, president of Zephyr Aircraft Engines in Zephyr Hills, Florida. Many shops maintain inventory of repaired cases and crankshafts for Lycoming engines and now new

parts sell for only a few hundred dollars more than the repaired parts do. Other shops told us owners who don't have serviceable cases and cranks are opting for the new parts.

Could Lycoming's price reductions portend 70 percent cheaper aircraft engines? Not likely, Palmatier said. The rollbacks apply only to select products. Although Continental's purchase of ECI in 2015 changed the competitive landscape for Lycoming on many parts, the company says the price rollbacks were in response to internal cost and sales reviews.

Wings of Freedom B-17 and B-24 Coming to Port Angeles in June

By Alan Barnard

I have been requesting and finally received confirmation that I will be again be bringing the Colling's Foundation Wings of Freedom tour to Port Angeles on June 21-23. I will need the usual help such as putting posters out and event security volunteers. This is the premier airport attraction for the last 15 years or so and this year should be no exception. Please plan to attend and help out if you can. My contact information is included below.

Alan Barnard
Wings of Freedom Stop Coordinator
abarnard@olypen.com

Available from our Members

Garmin color GPSmap 295
Vern Sprague has a new GPS Garmin 295 for sale. Value $360. Phone 360-683-7571
dollyvern@olypen.com

Sky Raider Kit for sale
Mel Rudin writes:
Bill Hancock was one of the early members of 430. He was building the Sky Raider for his personal fun plane. Unfortunately he died before he was able to complete the project. His widow, Sylvia, would like to get the use of her garage back; consequently she would like to find a good home for the project.

The Sky Raider is a single place, high wing, tail dragger that looks like a small Piper Cub. The fuselage is steel tube with aluminum longerons. The wing has two aluminum spars with wood ribs. All framing construction is complete; and all fabric and finishing components are stored with the kit. What remains to be completed is the cabin floor, instrument panel, selection of instruments and an engine with accessories. The engine that is currently with the kit is a Rotax 277. It is out of production. The best option is a Rotax 477 which is in production and was a recommended option for the kit.
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Aircraft hangars for sale at the Port Angeles Airport. Newer, well built. Now just $31,000 each. Call for brochure or more information. Alan Barnard, Windermere 360-461-0175

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George Llewellyn 360-477-8180

Lancair 235, O-235 LCE2 engine, aircraft 275 hrs since new & SMOH, hangared in Port Angeles. All electric instruments; no vacuum pump. Wooden cruise prop. A good airplane that cruises at 156 kts on 6.5 gallons per hour. 32 gallon fuel. Contact Bill Bartlett for more information at wtbartlett@msn.com

EAA Chapter 430 Membership Meeting Minutes

Date: 2/18/2017 Location: W28 Hangar #10

Meeting:

- Open with the of Pledge Allegiance:
- Introduction of Guests.
- Minutes published in the newsletter. Approved.
- Comments:
    - Special Announcement from Alan Barnard. Alan gave a presentation on the formation of the CLALLAM COUNTY AVIATION EMERGENCY MANAGEMENT DISASTER RESPONSE TEAM. A Development meeting is scheduled for March 28 at 1300 in the Clallam County courthouse basement. If you are interested please contact Alan Barnard at 360-461-0175 or abarnard@olypen.com
    - Board meetings are open to all members and held on the 2nd Friday of the month 3/10 0900 at Mariners Café
    - Scholarship: Dave Miller A big THANK YOU to CCPA for their generous donation of 1500 dollars to the Scholarship Fund.
    - Young Eagle Announcements: John Meyer suggested 4 dates for rallies in May, June, August, September
    - Tech Advisor Reports: None
    - Activities Update by Paul Kuntz:
        - There is a planned fly-out to Skagit/Bayview (KBVS) on June 10th, 2017.
        - Museum admission is $12/adults, $10 seniors.
        - Visit the Heritage Flight Museum, which houses the warbird collection assembled by Apollo astronaut Bill Anders.
        - Watch the flying some of the collection that day.
        - Plan for the day

  - Meet at W28 at 0830 for head count and briefing,
  - Fly to Bayview (30-min flight), park at the terminal for breakfast.
  - After breakfast, walk or taxi to the museum at the southwest end of runway 04-22, parking on the cargo ramp north of the museum.
  - We will depart for W28 or your home airport after the flying wraps up at 1500.
- Project Reports: by members.
- Next meeting will be March 25th 1000 W28 at Hangar #10
  - **NEED ----Raffle Manager: to run the 50/50**
  - NEED ---- Web / Newsletter:
  - NEED ---- Activities Chair

Social Meeting and Presentation:

Programs: Paul Kuntz introduced Keith McMinn on Antarctic Operations in an AF C-17. It was a fascinating, informative and factual account of the missions flown to Antarctica.

Meeting adjourned at 1200.

PS: Chapter Surveys emailed on 2/19/2017. If you have not yet replied with your data, please do so. We need your EAA number.

Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website: http://www.eaa430.org

If you are a chapter member and do not yet have a login to the Members page, you can register with your email address to create a login at the website.

Newsletter & Website SPONSORS

EAA 430 Flyer

Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

A Little Hangar Flying: Hats, Jackets and Landings

This month update will be somewhat short as I am busy with getting honey bees to clients that are as excited as a 6-year-old on their first flight. Tons of questions and so happy and excited you get excited also.

First, I would like to get about 25 orders for hats. They will be embroidered local here in Sequim by one of our members, with maybe an RV and another airplane of some type and the local chapter name on the hat.

Red and blue hats are planned and we will need to get pre-orders to make it work. The hats will be 20.00. The proceeds going to the college fund or what ever the club would like. We could also put the same logo on a Jacket. Sure need a good jacket here in Sequim. It's seems maybe the summer also, the way this year is going weather wise.

This is the time of year many are getting back into flying on these occasional good days that are becoming more linked up. Take good care to check everything on the airplane and more. Wash the dust off you and the airplane. I just cleaned an airplane that has sat for 12 years. More to go on that. We are inspecting it really well and doing more than just the yearly annual. I must say it's really dirty. It's like a time capsule from 12 years ago. Charts, flight logs, fuel, etc. Just left the airplane like a gold rush town. Everything just as it was parked 12 years ago.

These spring weather fronts move thru the area fast and the winds come up and its never down the runway when you get to the landing area. Think for a minute and if you have to go to another runway and sit out the weather for a few hours, it will change. Then proceed on.

Now is the time of year to get out and do lots of landings at several different airports in the area. One thing I always notice is when I come back into my home airport I make better landings. Why? Because all the visual ques are there. Where to turn base, final, get the airplane slowed down where to be on down wind, final over the threshold all make for a better arrival /landing.

Please don't settle for an OK approach to landing. Make a 100% effort to do your best every time you take-off and land. On the way to the new airport or one I haven't been to in a while I always review frequencies, pattern entry, pattern altitudes, etc. Which is the preferred runway also. I look around for smoke or wind on the water to see which way other pilots might be landing. It doesn't always work out but it sure helps. Remember because the wind is out of the east at one place close doesn't mean it out of the east 20 miles away. Remember if you chose to land straight in downwind, as one famous Reeve aviator said: that's no time to dilly dally around on getting the airplane on the runway at the

approach end. Not mid field. It's easier on the breaks getting it stopped on the remaining runway if the wheels are on the ground at the approach end not the mid field section. If you do miss judge, then its time to go around and start over. It's OK to do that.

So many pilots are in the LAND the airplane mode they forget they can and should go around. I have done it, on floats and in the 747. Mostly those go arounds involved another airplane on the runway or in the landing zone when on floats.

Weather is changing fast these days and its better to be on the ground wishing you were in the air than in the air wishing you were on the ground. Pull over before its gets bad.

I again hauled a load of honey bees up to the San Juan islands. Sure was fun to get out and see the beautiful San Juan's. I went to Decatur Shores Grass Runway, then up to East Sound, Then to Friday Harbor and over to Lopez and back to Sequim. On the way over I climbed to 6000 feet. And the same on the way back. I don't like landing in the water, unless on floats. Even then I didn't fly low over the ocean crossings.

Saw one guy at Friday Harbor commuting to work on Kenmore. Ha, he was from Alaska and an Alaska Airlines Pilot. We talked about hauling bees and we knew many of the same other pilots. Sure was a fun day. Of course the landings were great because I don't' want to mess up with 600,000 bees onboard.

Getting reading to go to McMinnville this morning for some Queen bees that need to be replaced. It's a good day all around. 25 kts on the nose all the way down, and rain. Oh and I tanked up at Port Townsend. The airplane and myself. 3.2 hours and when I got to Boeing on the way back I tanked up again. Then went to Sequim and later went over to Friday Harbor and over to East Sound. That's some traveling.

Let's get the orders for the hats and jackets going this next meeting. I'll have some prices and ideas of the way it will look. I hope.

Fly safe everyone and be careful.

Mike Radford

In This Issue

EAA CHAPTER 430 2017 BOARD & OFFICERS

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Membership	Bob Hicks	452-9399
Merchandise	John Meyers	477-1354

Young Eagles	John Meyers	477-1354
Scholarship	Dave Miller	452-7136

*Phones area code 360 unless otherwise noted

On the Horizon: Calendar of Events

EAA Chapter 430 meets on the last Saturday of the month, in Hangar 10 at Sequim Valley Airport at 10:00 a.m. For directions and additional information about chapter programs, see the chapter website: http://www.eaa430.org

Date	Topic
Monthly Chapter meeting April 29, 2017 10:00 a.m. Hangar 10 Sequim Valley airport	Program on National Air Races by Mike Lavelle (rescheduled from March meeting).
Saturday May 20, 2017 10:00 am – 2:00 pm	First 2017 Young Eagle Rally, Sequim Valley airport
Saturday, May 27, 2017 10:00 am Hangar 10 Sequim Valley airport	Chapter meeting and potluck luncheon. Program: "All for a Spark: from Magnetos to Electronic Ignition" by EAA 430 tech counselor Dan Masys.
Saturday June 10, 2017 0830-1500	Chapter Fly-Out to Skagit/Bayview (KBVS) and Heritage Flight
	Museum. See February 2017 chapter meeting minutes for details.

W28 Night Light, Revived

By Dan Masys, EAA 430 technical counselor. Adapted from April 2017 Sequim Valley Airport hangar owner's newsletter, with additional content added.

Crouse Hinds DCB-225 rotating beacon on tower

Rotating beacons at airports have been a fixture of the aviation landscape since the 1930's, and in those early days they were a critical nav aid for both cross country and airport approach navigation. In the 1940's the Crouse Hinds company developed the quintessential airport beacon called the DCB-225, which was a 36 inch beacon with a 1000 watt or higher bulb, often mounted on a 50 foot tower that still populates many airports, particularly in the wide open territories of the Great Plains. There must be a pilot somewhere who has never seen one of these, but I've never met that pilot. The 'famous' DCB-225 also had a lesser known little brother, the DCB-10, and that's where our Sequim Valley airport story begins.

Crouse Hinds DCB-10 rotating beacon on top of the W28 maintenance hangar

1944 vintage rotating brass slip rings and contact brushes provide 110v current to W28 beacon bulb

The exact trail of ownership that led Jack Sallee to acquire the rotating beacon on top of the W28 maintenance hangar has been lost over the years, but it is definitely thoroughbred stock.

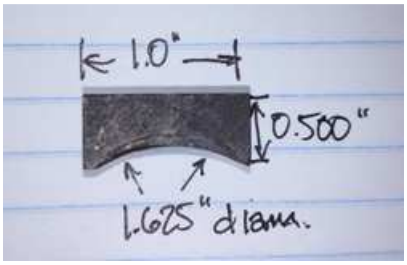
Our Crouse Hinds DCB-10 beacon was built in 1944 with a sturdy glass and steel weather enclosure, brass gears, and a small electric motor that has turned at a steady 5 revolutions per minute for more than 70 years. Aviation DCB-10's have a pair of 10 inch Fresnel lenses, one green and one clear, with a 750 watt bulb, now halogen rather than incandescent, in between them. By FAA specs it throws a flash that is angled skyward at six degrees, visible for 20 miles in clear air.

When fitted with other color lenses their weatherproof design made DCB-10's a favorite of the US Coast Guard for smaller lighthouses, particularly along the southeast coast of Alaska. Although the DCB-10 has a spare bulb on a spring-mounted swing arm for rapid bulb switching, it still requires a human being to tend the light and make the bulb switch, so in the 1970's the Coast Guard replaced most of its lighthouse DCB-10's with automated, remotely-controlled lights.

DCB-10's also require periodic lubrication, and they slowly wear out their specialized brushes that conduct current to the rotating light through a set of brass slip rings. Newer technology lights took over the aviation market, and the Crouse Hinds company left the beacon business in the 1970's. A few specialized maintenance shops bought up the company's parts inventory, which was used up in the 1990's. So any airport with a DCB-10 beacon that needed service or parts was on its own after that.

The day the W28 beacon light went out 'for good' isn't known either, but it was already dormant in 2009 when this pilot first landed at the airport. It had succumbed to the slow but relentless wear on its slip ring brushes, so no current could get to the bulb.

Three nice things about mechanisms designed in the 1940's are that they are generally sturdy, simple, and have measurements in common fractions of an inch. The circular slip rings on the DCB-10 have a curved bearing surface that is exactly 1-5/8th inches in diameter, which happens to be the diameter of the holes they cut in modern granite countertops for kitchen faucets. And the brush material, which is a self-lubricating alloy of graphite and copper, just happens to be the same material used in brushes for large industrial motors.



Slip ring brush for the W28 beacon

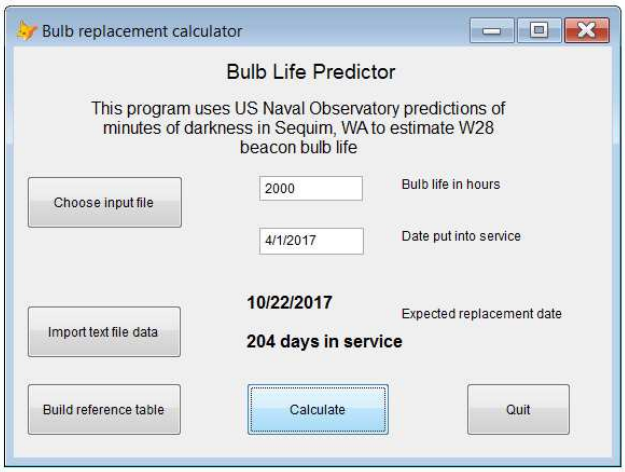
Armed with the dimensions of one of the remaining brushes in the W28 DCB-10, and a quick search of e-Bay, Amazon and Home Depot websites, the necessary materials and tools were soon in hand. Well, relatively soon. The heavy 1 x 2 x 5 inch industrial motor brush stock costs only $5 a bar but literally came on a slow boat from China, delivered two months after the

online order was received by the seller in Shanghai (for a $1 trans-Pacific shipping charge!) After cutting the brush to size on a bandsaw, the perfect diameter curvature on the brush came by drilling a slice of the brush using a 1-5/8" carbide (granite countertop) hole saw from Home Depot, and tapping a couple of 6-32 mounting holes in the top.
Voila. 1944 slip ring brush.

The airport beacon was happily recommissioned in July of 2016 and soldiered on its nightly rotating light duties through the colder-than-normal winter, with one tripped circuit breaker episode apparently caused by freezing temperatures in January. Then in March of 2017 the light went out again, this time for the simple reason the bulb had used up its design lifespan.

A new 750 watt halogen bulb was installed in the beacon on April 1. (No, really.) The bulb has a nominal 2000 hr. life, so the question is, how long will this one last, when it comes on at dusk and turns off at dawn each day?
Since pilots think about daylight and night time differently and in more detail than normal folks, this turns out to be a deceptively simple question. (And if you've had enough beacon trivia at this point, please go on to the next article in this newsletter now…)

It seems sensible to think that, averaged over a year which has 365 x 24 = 8760 hours, there would be about 4400 hours of darkness occurring annually, and a 2000 hour bulb ought to last somewhat less than six months. Not so fast, Captain. The hours-of-daylight difference between the shortest and longest days of the year in Sequim is over 7 hours(!) and we are heading toward the summer solstice as this article is being written. So your faithful correspondent the beacon guy has done two things. The first is add a digital hour meter to the beacon so the actual time the beacon bulb is turned on gets added up. The second is downloading a file from the Naval Observatory that has the actual number of hours and minutes of darkness each day in Sequim, for which I wrote a computer program that will accept bulb life and start date, and calculate the estimated replacement date for the bulb by adding up the minutes of darkness that accumulate from that start date forward through the year:



To give a sense of the wide swings between dark and light duration in Sequim, the program predicts that the current bulb will hit its nominal lifespan after 204 days of service, in the third week of October 2017. But the replacement put in on that date would last only 137 days due to the extra hours of darkness between October and March!

Over the coming months it will be interesting to compare the program's predictions with the actual hours of power-on data from the hour meter, to adjust for things like civil twilight and the sensitivity of the photocell dawn-to-dusk switch. Which should be fun on those scuzzy, dark days when there is no flying, and there is excess time to just think about stuff… Oh, and in the meantime if you happen to see the W28 beacon isn't working, just send an email to the beaconmeister: dmasys@uw.edu

Why Change the Oil?

From AOPA blog 2/24/2017 by Mike Busch

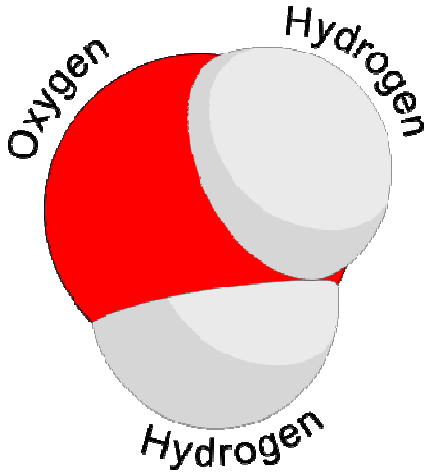
Continental and Lycoming tell us that we must change the oil in our engines every 50 hours or 4-6 months, whichever comes first—and that's if we have a full-flow oil filter installed. If we have only an oil screen, then the oil change interval goes down to 25 hours. Did you ever wonder why we need to change the oil so often?

It's not because the oil breaks down in service and its lubricating qualities degrade. The fact is that conventional petroleum-based oils retain their lubricating properties for a very long time, and synthetic oils retain them nearly forever.

Consider, for example, that most automobile manufacturers now recommend a 7,500-mile oil-change interval for most cars and light trucks. That's the equivalent of 150 to 250 hours of engine operation. In fact, oil analysis studies have shown that a synthetic automotive oil like Mobil 1 or Amsoil can go 18,000 miles without appreciable degradation, and that's the equivalent of 400-600 hours.

Filth

No, the reason we change oil in our aircraft engines every 25 to 50 hours is not because it breaks down. It's because it gets contaminated after 25 to 50 hours in an aircraft engine. In fact, it gets downright filthy and nasty.



DHMO

Dihydrogen monoxide (DHMO) is a highly corrosive chemical that is produced in copious quantities during combustion, and can cause great harm to costly engine components when it blows by the piston rings and contaminates the engine oil. You may be more familiar with DHMO's common chemical formula: H2O.

Compared with automotive engines, our piston aircraft engines permit a far greater quantity of combustion byproducts—notably carbon, sulfur, oxides of nitrogen, raw fuel, partially burned fuel, plus massive quantities of the corrosive solvent dihydrogen monoxide or DHMO (see graphic)—to leak past the piston rings and contaminate the crankcase. This yucky stuff is collectively referred to as "blow-by" and it's quite corrosive and harmful when it builds up in the oil and comes in contact with expensive bottom-end engine parts like crankshafts and camshafts and lifters and gears.

To make matters worse, avgas is heavily laced with the octane improver tetraethyl lead (TEL), which also does nasty things when it blows by the rings and gets into the crankcase. (If you're as old as I am, you may recall that back before mogas was unleaded, the recommended oil-change interval was 3,000 miles instead of 7,500 miles.)

So one of the most important reasons that we need to change the oil regularly in our

Continentals and Lycomings is to get rid of these blow-by contaminants before they build up to levels that are harmful to the engine's health.

Acid

Another reason we need to change the oil regularly—arguably even more important than disposing of contaminants—is to replenish the oil's additive package, particularly its acid neutralizers. When sulfur and oxides of nitrogen mix with DHMO, they form sulfuric acid and nitric acid. If you remember these dangerous corrosives from your high school chemistry class, then you'll certainly appreciate why you definitely don't want them attacking your expensive engine parts.

To prevent such acid attack, aviation oils are blended with acid neutralizer additives. These are alkaline substances that neutralize these acids, much as we might use baking soda to neutralize battery acid. These acid neutralizers are consumed by the process of neutralizing acids, so it's imperative that we replenish them before they get used up to an extent that might jeopardize our hardware. Of course, the way we replenish them is to change the oil.

How can we tell when the acid neutralizers in the oil have been used up? It turns out that there's a laboratory test that measures the level of unneutralized acid remaining in the oil. This is known as the "total acid number" or "TAN" test. Some oil analysis firms can perform this test on your oil samples. However, it's not routinely done as part of the normal oil analysis report, so you need to specially request a TAN test when you send in your oil sample (and be prepared to pay extra for it).

Intervals

Most owners don't bother with the hassle and expense of TAN testing, and simply change their oil at a conservative interval that's guaranteed to get the junk out and fresh additives in before anything untoward is likely to occur.

On my own airplane, what I do (and generally recommend to my clients) is to change the oil and filter every 50 hours or 4 calendar months, whichever comes first. This means that operators who fly at least 150 hours a year can go 50 hours between oil changes, but operators who fly less will use a proportionately reduced oil-change interval.

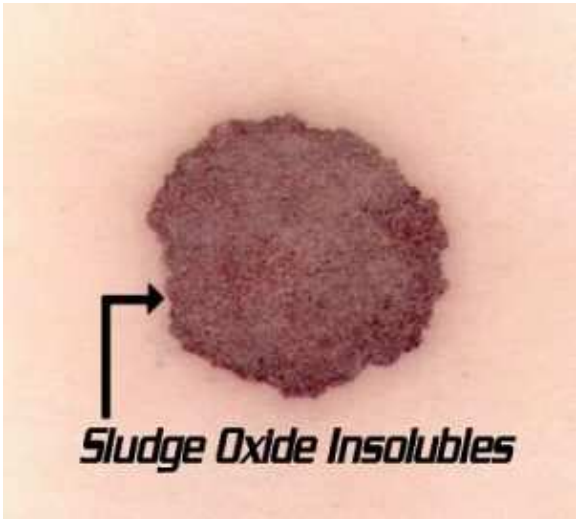
This recommendation assumes that the aircraft has a full-flow (spin-on) oil filter installed, that it operates primarily from paved runways, and that it has decent compressions and relatively low blow-by past the rings. Engines that have only an oil screen (no filter) should have the oil changed every 25 hours. Engines that operate in dirty or

dusty conditions and ones that have high oil consumption due to high blow-by should have more frequent oil changes.

My friend Ed Kollin—lubrication engineering wizard who used to head Exxon's lubrication lab and who developed ASL CamGuard—is even more conservative. He preaches that oil should be changed no less frequently than every 30 hours, and frowns when I suggest that it's okay to go to 50 if you fly a lot.

Insolubles

Another important indication of oil condition can be found in standard oil analysis report provided by some labs—notably the one I prefer, Blackstone Laboratories in Ft. Wayne, Indiana—is the "insolubles" test. This test is performed by placing the oil sample in a centrifuge to separate out all solids and liquids in the sample that are not oil-soluble.



Virgin oil normally contains no insolubles. The insolubles found in drained engine oil come from three sources: (1) oxidized oil that breaks down due to excessive heat; (2) contaminants from blow-by of combustion byproducts; and (3) particulate contamination caused by poor oil filtration. If your oil analysis report reveals above-normal insolubles, it might be indicative of an engine problem—high oil temperature, excessive blow-by, inadequate filtration—and almost certainly means you should be changing your oil more frequently.

By the way, did I mention that I'm a huge fan of laboratory oil analysis? I use it religiously, recommend it strongly to all piston aircraft owners, and believe that it's one of the most important tools we have—along with oil filter inspection and borescope inspection—for monitoring the condition of our engines and determining when maintenance is necessary.

Mike Busch

Available from our Members

Garmin color GPSmap 295
Vern Sprague has a new GPS Garmin 295 for sale. Value $360. Phone 360-683-7571
dollyvern@olypen.com

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Mel Rudin writes:

Bill Hancock was one of the early members of 430. He was building the Sky Raider for his personal fun plane. Unfortunately he died before he was able to complete the project. His widow, Sylvia, would like to get the use of her garage back; consequently she would like to find a good home for the project. The Sky Raider is a single place, high wing, tail dragger that looks like a small Piper Cub. The fuselage is steel tube with aluminum longerons. The wing has two aluminum spars with wood ribs.

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Lancair 235, O-235 LCE2 engine, aircraft 275 hrs since new & SMOH, hangared in Port Angeles. All electric instruments; no vacuum pump. Wooden cruise prop. A good airplane that cruises at 156 kts on 6.5 gallons per hour. 32 gallon fuel. Contact Bill Bartlett for more information at wtbartlett@msn.com

EAA Chapter 430 Membership Meeting Minutes

Date: March 25, 2017 Location: W28 # 10 1006

- The Pledge of Allegiance
- Introduction of Guests
- Minutes as published in the newsletter stand approved as written.
- Business meeting:
    - Correspondence to the chapter this month – None
    - Announced: Financial balances/reports and the board minutes are available in the members section on the web site. Default password for your initial login is ResetPassword (case sensitive)
    - Announcement: Board meetings are open to all members and held on the 2nd Friday of the month. Next meeting is 4/14 at 0900 at Mariners Café
    - Comments by membership chair Bob Hicks requesting EAA numbers for the members. Also only National EAA members are eligible for chapter family membership.
    - Scholarship: nothing to report.
    - Young Eagle Announcements: John Meyer (absent) Reminder for everyone that the first YE event will be May 20 for pilots and ground crews. If you have not completed your "Youth Protection Policy & Program", please do so before arriving to help with Young Eagles. Certificates will be checked if you have not already presented it to John Meyers.
    - Tech Advisor Dan Masys / Jim Cone – nothing to report
- Project Reports: (members open forum) or interesting recap of a recent trip somewhere?

- Next General meeting will be April 29th 1000 here in Hangar #10
- End of business meeting.
- Social Meeting and Presentation: Paul Kuntz introduced John Fredrickson, a volunteer at the Boeing Archives, who talked about North American Aviation during WWII.
- Adjourned at 1130

Respectfully submitted / Ken Brown, Secretary

Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website: http://www.eaa430.org

If you are a chapter member and do not yet have a login to the Members page, you can register with your email address to create a login at the website.

Newsletter & Website SPONSORS

EAA 430 Flyer

Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

A Little Hangar Flying: If It Flies, and First Potluck of the Season!

Flying Queen Honey Bees to customers all over Puget Sound to replace the dead ones.

Spring has sprung. Guys and gals are getting out and flying their air machines. The local balloon will be making morning flights over the farm land soon. Why do they only go up in the morning?

EAA 430 has some fly outs planned. Check into those flights, listed on the Events page.

I would like to get some orders on record together for hats, T-shirts with pockets, maybe a jacket for the club. They will have our logo embroidered on them. Let's get that done at the next meeting. 25 of each would get the program going. All proceeds would go to what ever we vote on. For suggestions, maybe the scholarship fund.

It's time to really look over your airplane before flight. Don't get in a hurry. Spring fever gets everyone. Take a look at the tire pressure, the inside of the cowling and all the holes a nesting bird can get into. If the plane isn't and you're not in top condition for the flight take a few moments and think… should I really be going up in the air?

If you have the itch to go over to the islands, make sure you go high enough to glide to the return point of the other side. Please don't think your going to land in the water by a boat. (No one has that kind of luck). Have you practiced a glide in your airplane lately? I was showing a fellow pilot how just by pulling my prop control all the way out what it felt like when you have less drag by coursing up the pitch of the propeller. The glide is really extended. Note: you can't accomplish that if there is no oil pressure.

We had a big day on Saturday, May 20th – first Young Eagle Flights of 2017.

Then there are the fly outs we are planning. Not to mention all the airshows going on this summer.

I'm going to Alaska. Either in my airplane or on Alaska Airlines big jet. Depends if my friend's float plane is working. He rebuilt the engine. So, since he doesn't fly, I get to break that in.

Sure is fun to go to all the old haunts around the Great State of Alaska. I told my son Tyler, we can take Lisa and Sophia to see the bears at Katmai. He said, no let's go fishing-- we can watch the bears where we fish. He's right! Dang bears everywhere.

There have been some great clam tides down south this last month. The way I see it… 15

razor clams per person gets real expensive. But!!! if you take a couple kids its all worth the gas. Gary Winnope goes all the time and the smile on his face when he comes back says it all.

Go over to the Goose for lunch or down to Bremerton for Halibut and Chips. Head down to Chehalis for dinner at the golf course or to Tacoma Narrows for dinner. Go over to Boeing, park at Kenmore Aero, (get some fuel – it's cheap). Ask for the crew car then go to 13 coins' restaurant for dinner.

I thought hard about going to Alaska and flying for Branch River Air this summer for a couple of months. But then I took two Aspirin, laid down until the thought went away. It seems fun but I've done that dream.

Hunter the Red Tail Hawk before release back into the wild.

I trained a Red Tail Hawk last winter. Only caught a mouse. I let him go back to the wild; will train another this fall. It was a life long dream to become a Falconer. I'm an Apprentice right now. We will be training for a rabbit kill. Boy, what a learning curve. So the moral to that story is if you want to do something, do it!

If you're reading this and want to fly across the USA in your homebuilt there are a million reasons why not to. But if you don't do it, you WILL regret it later. Some reasons why not to…cost of gas, weather, what about the chickens, the dog, what will my wife think? Lots of reasons. But get in the airplane, go to one airport at a time, buy gas then move on. If your tired, stop for the day. If the weather is bad, for crying out loud… land! Go to Oshkosh. It is not very hard. Go back home if you're not from here and see old friends. I loaded my girls up in the 180 and flew all the way across the country to my class reunion a few years ago. Then came back the southern route. Yes, I had to stop for weather and darkness. But I will hear about it for years from my girls.

Come on out to the First pot luck at hangar 10 next Saturday, May 27th at 10:00 AM. It's going to be a good one.

Mike Radford

In This Issue

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On the Horizon: Calendar of Events

EAA Chapter 430 meets on the last Saturday of the month, in Hangar 10 at Sequim Valley Airport at 10:00 a.m. For directions and additional information about chapter programs, see the chapter website: http://www.eaa430.org

Date	Topic
Saturday, May 27, 2017 10:00 am Hangar 10 Sequim Valley airport	Chapter meeting and potluck luncheon. Program: "All for a Spark: from Magnetos to Electronic Ignition" by EAA 430 tech counselor Dan Masys.
Saturday June 10, 2017 0830-1500	Chapter Fly-Out to Skagit/Bayview (KBVS) and Heritage Flight Museum. See February 2017 chapter meeting minutes for details.
Saturday, June 17, 2017 10:00 am – 2:00 pm	Second 2017 Young Eagle Rally, at Fairchild Int'l Airport, Port Angeles
Wed.-Fri. June 21-23, 2017	Collings Foundation Wings of Freedom event at Fairchild International Airport
Saturday, June 24, 2017 Hangar 10 Sequim Valley airport	Chapter meeting and potluck luncheon. Program: Peter Morton, retired Boeing Vice President, will talk about the history of the Boeing two-pilot 757/767 cockpit.
August 21, 2017 Madras, OR airport	Total Solar Eclipse viewing. Details below
August 26-27, 2017 0900-1600 Sequim Valley airport	Olympic Peninsula Air Affaire. EAA 430 members are encouraged to participate in ground display of experimental aircraft. Volunteers are always needed to man the chapter information booth.
September 9-10, 2017 Hood River, OR (4S2)	Fly-out to Western Antique Aeroplane and Automobile Museum show and Fly-in

Wings of Freedom B-17 and B-24 Coming to Port Angeles, June 21-23

The Collings Foundation B-17and B-24 will visit Port Angeles from Wednesday, June 21 to Friday

June 23. This will be the biggest aviation activity at Wm. R. Fairchild airport in two years and this year will now be even larger with the addition of vintage cars, an AA Fuel dragster on site, a Coast Guard helicopter, catered BBQ and Band, all on the Wednesday they arrive. Volunteers are needed for this event; please contact Alan Barnard: abarnard@olypen.com

Charlie King's Miter Saw

EAA 430 member Charlie King was being his usual generous self and lent his miter saw to somebody, but now Charlie can't recall who it was. If you have Charlie's saw, please e-mail him: chask1@wavecable.com

Fly to the Total Solar Eclipse

On August 21st Madras, OR will be in the path of the total solar eclipse. The eclipse event starts 0900 local, and ends at 1140. There will be a two-minute period of totality that starts at 1019. Madras airport (S33) is very close to the centerline of the path of the eclipse, for maximum totality time. All of the hotels in the path of the eclipse have been booked for two years, but the Madras airport is permitting camping on the airport by your plane. They are expecting several hundred visiting aircraft for the event, and will likely have to close the airport sometime before the eclipse. The FBO Berg Air is taking reservations by mail for parking spots. Check their web site:
https://www.bergair.com/solareclipse
for the reservation form and instructions for mailing. Several parking options are available, including $175 for a spot in the grass Thurs 8/17 through Tues 8/22.

Savvy Maintenance: Borescope Ascendancy Time to topple the venerable compression test?

By Mike Busch
AOPA Pilot magazine, May 1, 2017

The differential compression check has been a mainstay of piston aircraft engine maintenance for 80 years. Like anything else in aviation that's been around for a long time, various old wives' tales have evolved about the procedure, passed on from journeyman mechanic to apprentice, and later taught in A&P schools and documented in various textbooks and advisory circulars. Ask your mechanic why he performs a compression check a certain way or interprets the test results as he does—and, if he's honest, he'll probably answer, "That's the way I was taught to do it, and that's the way I've always done it."

One pervasive old wives' tale has it that compression readings in the high 70s are excellent, in the low 70s are good, in the high 60s are marginal, in the low 60s are poor, and anything below 60/80 is unairworthy. Another widely accepted old wives' tale is that an engine with compressions in the low 60s is a "tired engine" that will not put out full rated horsepower. Both are dead wrong.

More than three decades ago, Continental Motors issued a service bulletin (M84-15) debunking the first of these superstitions by establishing a new go/no-go criterion for compression tests: the master orifice tool. Mechanics who followed this guidance were astonished to find that compression readings in the low- to mid-40s were deemed acceptable by Continental.

This 1984 guidance was based on a series of engineering studies performed using an IO-550 engine mounted in the dynamometer test cell at the Continental factory in Mobile, Alabama.

Those studies revealed that when the compression ring gaps on the IO-550's pistons were filed oversize intentionally to reduce the compression of all six cylinders to 40/80, there was no measurable loss of horsepower output (although there was an increase in oil consumption). This effectively debunked the "tired engine" old wives' tale.

Enter the borescope

Nineteen years later, Continental threw mechanics another curveball by issuing Service Bulletin SB03-3 (which superseded M84-15), directing that a borescope inspection of each cylinder be performed at each annual and 100-hour inspection, and any other time that a compression test is done. It further made it clear that the borescope, not the compression tester, was to be the gold standard for assessing the airworthiness of a cylinder. It directed that if a cylinder flunks a compression test but the borescope reveals no obvious cause for the low compression, then the engine is to be flown for at least 45 minutes and the compression test be redone. Only if a cylinder flunks its compression test twice in a row (with at least 45 minutes of flying in between) is it deemed unairworthy.

Continental's SB03-3 was pretty shocking to mechanics when it was first published in March 2003. In those days, few GA maintenance shops owned a borescope (unless they did a lot of turbine work), and there was no training available to mechanics on how to use one to inspect a piston aircraft engine cylinder. Most A&P schools still don't teach anything about how to use borescopes in piston engine maintenance.

The service bulletin recommended using a low-cost rigid optical borescope—the Lenox Autoscope, which was so named because it was designed for automotive use, and at more than $2,000 was one-tenth the cost of the fiber-optic borescopes being used for turbine engine hot-section inspections. Still, lots of mechanics and small GA maintenance shops were not amused by being told that they had to shell out two large to buy one of these instruments. Fourteen years later, some A&Ps still don't own a borescope.

Eyeballing the combustion chamber

I was an early adopter of borescopy. Having gone through the painful experience of pulling cylinders because of low compression readings, only to find nothing physically wrong with them, I was anxious to adopt this more enlightened way of evaluating cylinder condition. I borrowed a Lenox Autoscope from a shop on my field and began inspecting the 12 cylinders on my Cessna 310. It was an eye-opening experience, almost as if I could climb inside each combustion chamber—or at least stuff one eyeball inside.

Visual diagnosis

By inserting the scope through the top spark plug hole and twisting and turning it, I could get a decent view of the intake and exhaust valves, the cylinder walls, and the piston crown. I found it spellbinding. Direct inspection of the combustion chamber provided a much better picture and deeper understanding of the true condition of the cylinder, compared with the crude, indirect assessment provided by the differential compression test.

These images were captured with a ViVidia Ablescope VA-400 (below). The quality is pretty spectacular for a $200 scope.

Lycoming O-320 exhaust valve. Note the symmetrical "bullseye" appearance indicating a healthy valve.

This is a very sick exhaust valve on the verge of failing catastrophically. Note the asymmetrical appearance: That's bad!

Closeup of the healthy O-320 exhaust valve, with a good view of the seat and valve-sealing surface.

O-320 cylinder barrel and piston. This jug is very worn: Note the vertical scoring and lack of crosshatch.

A compression test could tell you that air was leaking past the exhaust valve, but with the borescope you could tell whether it was because of a benign glob of lead on the seat that would quickly resolve itself the next time the engine ran—or a malignant, warped or eroded valve likely to fail catastrophically in the next 10 hours. How cool was that?

Over the years, the compression test has proved untrustworthy and prone to false positives, resulting in tens of thousands of cylinders being removed unnecessarily (including a few of mine). That's why the SB03-3 guidance calls for any disqualifying compression test that is not corroborated by borescope evidence be retested after flying for at least 45 minutes. That's excellent advice. I've seen many cases where a cylinder that flunked the first compression test easily passed the second one. In one notable case involving a Cirrus SR22, a cylinder that tested at 38/80 (and that the shop doing the annual wanted to yank) wound up measuring 72/80 on the retest after a one-hour flight.

SB03-3 did not go so far as to recommend that borescope inspections should replace the venerable compression test. Continental couldn't do that, because the requirement to perform a compression test is written into the FARs (Part 43, Appendix D). But SB03-3 did all it could to convey that Continental is no big fan of the compression test for determining cylinder airworthiness. (A senior Continental executive once confessed to me that if they could've dropped the compression test altogether, they would have.)

Continental's guidance on borescope inspections has saved owners millions of dollars in maintenance costs. I consider SB03-3 to be the best thing ever written on the subject of how to decide whether a cylinder needs to come off. It has saved owners of Continental engines millions of dollars in maintenance costs. In my view, it's high time that Lycoming followed suit and revised its archaic guidance on the subject. (Last year, Continental incorporated the contents of SB03-3 into its new Standard Practice Maintenance Manual M-0, so it no longer exists as a separate service bulletin.)

Today's scopes: wow!

In the computer industry, Moore's Law (named after Intel co-founder Gordon Moore) states that the number of transistors packed on an integrated circuit will double every two years. Something similar has taken place in borescope technology in the 14 years since SB03-3 was published. Today's borescopes use tiny, cheap, solid-state CCD cameras to replace the costly optics that were previously required. The result is the current crop of scopes is both vastly better and an order of magnitude cheaper than the benchmark Lenox Autoscope.

My current favorite is the ViVidia Ablescope VA-400 scope from Oasis Scientific (see page 86), which you can purchase on Amazon.com for less than $200. It comes with a USB cable that can be plugged into any notebook PC or Android tablet, and with software for both Windows and Android that can capture both still photos and videos. In addition to its impressive image quality and excellent lighting, the ViVidia scope has the unique ability to adjust its viewing angle from zero degrees (looking straight down at the piston) to 180 degrees (looking backwards at the valves), or anything in between. (By contrast, the $2,300 Lenox Autoscope has a fixed 90-degree viewing angle and no capability for capturing images.)

The ViVidia Ablescope VA-400 viewing angle can be adjusted from 0 degrees to 180 degrees by pressing the plunger on the handgrip.

With scopes of this quality available for $200, there's no excuse for any A&P not to own one and to use it as his primary means of assessing cylinder condition. In fact, anyone who does owner-performed maintenance should consider buying one.

Compression testers lie all the time. Borescopes never do.

Mike Busch is an A&P/IA.

Available from our Members

Aircraft hangars for sale at the Port Angeles Airport. Newer, well built. Now just $31,000 each. Call for brochure or more information. Alan Barnard, Windermere 360-461-0175

Large T Hangar for rent at Diamond Point Airport. $200.00/month.
George Llewellyn 360-477-8180

EAA Chapter 430 Membership Meeting Minutes

Date: April 29, 2017. Meeting started at 1003. Location: W28 hangar. Followed by the Pledge of Allegiance.

- Introduction of Guests. We had 6 guests introduced by members.
- Minutes Approved as Corrected.
- Reports
    - Membership: Bob Hicks reported 63 paid members and 79 on the roster. He is requesting EAA numbers for all members. Also only National EAA (family) members

are eligible for chapter family membership. The word (family) inserted following "National EAA" since it was omitted.

- Young Eagles: John Meyer. May 20th will be the first event of 2017. Ground crew and pilots need to have background checks completed prior to the event. Copies of certificates to John.
- Activities:
  - Potlucks May to September
  - Bayview fly-out June 10
  - Possibilities are McMinnville and Hood River.
- Project Reports: Many members talked about their current projects and updates. We have a very busy chapter.
- Old business: None.
- New Business: None from the board or membership

Comments from the Membership:

- Tools. It is very important to have all tools signed out for accountability. Has anyone seen the ramps for the scales? They are not in our inventory. If you know where they are please contact Dan Masys or Mike Radford.

Close of the business meeting at 1040.

- Break for raffle / coffee.

Social Meeting

Programs introduction by Paul Kuntz of Mike Lavelle, who spoke about the National Air Races from 1920 – 1940. Fantastic program.

35 members signed in.

Next Chapter meeting is May 27 at 1000 at W28 and the beginning of the Pot Luck season. FOOD is always a good draw.

Respectfully submitted / Ken Brown Secretary /

Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website: http://www.eaa430.org

If you are a chapter member and do not yet have a login to the Members page, you can register with your email address to create a login at the website.

EAA 430 Flyer

Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

A Little Hangar Flying: Decisions, Decisions!

I got to fly to a river strip up in the Alaska Wilderness. Of course everything five minutes out of Anchorage is wilderness. I had never been there before but the mission was to drop some clients off to look at some property, then return and pick them up later that day. It's more fun to look at property in the winter. (The moosequitos aren't as bad). This particular river is the Tokasitna River out of the Tokasitna Glacier at the base of Mount McKinley now renamed Mt. Denali. "The Great One".

Snow machines pack these strips down all winter so supplies can be brought in by Bush Planes on skis and not sink out of sight upon land after a deep snow. Many times no one is around to give a runway report. You just have to go and make your best decisions.

Decision making is the topic this month. It's one that has so many variables and the bottom line is, if things turn out good and you don't bend any metal you get to go again. So if you want to keep going and flying you better make good decisions all the time.

They used to say you can't teach judgment. Well, those thoughts have changed. They had to address this in Alaska because so many pilots were making so many bad decisions and many clients were getting hurt, killed etc. It it had to be checked/stopped.

The FAA got together with the Old Pilots and picked their brains on what they did to last as long as they had in an environment that is truly unforgiving. We used to say you may survive the crash but if you didn't file a flight plan no one will come get you. You will die of the environment. Cold, terrain, injuries, bears, etc. One time I was out on Lake Hood and two FAA guys came walking up through knee deep snow with there clip boards. I'm thinking "Dang, I get ramped everywhere I go." But they were there handing out pamplets on flying safe in Alaska. Cool!!!

The FAA held seminars on survival, and many other seminars on safe flying. They had meetings with Air Taxi owners to incorporate safety as a standard attitude and recognize their Pilots different skill levels and experiences to send the right pilot for the flight. Don't send a new guy into a small lake pick up a full load or to the canyon to drop off a full load of supplies and pick up the Fat Family of Adults and kids that all weigh over 300 pounds. As the Pilot in Command you have to learn to say NO. Not being able to say No will get you killed or at least scared.

I took some lodge guest into the worst lake in the whole system. Ha! The pilot that came and got them had to ferry one at a time out in the Beaver. He was a high time guy and a really good decision maker. He could get off the lake but the climb out was the bitch. Tall trees on rising terrain. Sounds fun huh? So what the heck, ferry them out one at a time. See what the plane will do and not scare everyone. Including the pilot.

That brings up another part of this. 95% of the time the passengers have NO CLUE! They trust the pilot with their lives. It always amazes me. Here they are climbing in a single engine airplane with a guy that looks like he's 20 years old. Going to a lake in the Alaska wilderness. Talk about sensory overload! So as Pilot in Command of the trip and all that involves that, we as PIC have a tremendous responsibility to make the flight in a single engine float plane or ski plane as safe and uneventful as possible. That goes on everyday flights with just yourself and those someones you don't know. As an Air Taxi operator you simple can't make any money if safety isn't top priority.

Flying some fuel to the Lodge.

Some clients I've never met going on a sight see flight.

Landing in the Canyon!!

Mud Suck, West Virginia, down the Road from Tick Ridge, "Malory's Airport". One way in and one way out.

Keep the ball centered in the turn!!! Everyone lived, the airplane went out with the tide.

Simple explanation is, low slow turn with no visual references on the large wide flat beach. Slipping with the "ball out" fast stall roll over close to the ground. Simple alternative is to go by the landing site, wings level, look it (the landing area) over and make a normal pattern. He tried to turn around and was looking outside the airplane not realizing the cross control situation while looking intently at the landing site and trying to get back to the final approach corridor. Plus, there are no wind references. If there is a cross wind its very easy to cross control to correct for drift across approach path.

Can you imagine? A life, that everyday you wake up you get to go to a new place!

What would you do? Ha ha, I landed in the lower right hand corner at KTLH (Tallahassee, FL) BEFORE it got serious.

I went on a trip the other day with three VIP's from another country. It was a flight to Spokane, Richland, then home.

Going over was fine. Up over the Cascades, clear weather. Then to Richland, WA. From there we were to go back to Renton, WA. But the mountains were obscured, so I went around thru the Columbia River Gorge down by The Dells.

All was fine until we made the turn going up I-5. I got to Kelso and the weather was down into the trees. I was down to about 1200 feet and looking at not being able to stay VFR. Let's see…end of the day, getting dark, rain, low clouds, Portland is open…just went by there. Rental cars, hotels etc. So I told the guys I was turning around and going to PDX and they could get a rental and head up I-5. I was happy, they were happy. It may not be what we started out to do but I really don't care. The plan changes constantly and I'm not into night IFR in an airplane that isn't mine. Especially when I'm not current IFR. I stayed with the airplane and they went to Seattle. I came out the next day about 1300. VFR all the way to Sequim.

Please don't let mean ol' Mr. Get-home-itis cause you to make bad decisions.

Fly Safe, Tom Hart always told me.

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Mike Radford

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Wings of Freedom B-17 and B-24 Coming to Port Angeles, June 21-23

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Scholarship Student Update

Our Scholarship recipient, Seth Mulhausen, has finished his sophomore year at Rocky Mountain College. His transcript shows an overall GPA of 3.6 for the first two years, excellent in my book.

He is about to start flying the Bonanza to complete his commercial rating and start on his CFI rating. Seth is also attending the summer session to take advantage of the good flying weather. He's thinking long term and finished the 737-200 systems class for familiarization with large aircraft. He also joined a group of students that traveled to Oklahoma City to experience high altitude chamber training at the FAA Academy.

He was invited to make a safety presentation at the semester safety meeting, topic was CFIT and analysis of a Bonanza that crashed in the Cascades. Apparently the presentation was well received because Seth was voted to be the President of the Aviation Student Advisory Committee, a group organized to provide student input and provide the best aviation education possible.

Bottom line, Seth is doing well.

Dave Miller
Scholarship Coordinator

2017 Young Eagle Update

Chapter 430 has executed two successful Young Eagle Rallies this season (May 20 and June 17). New this year is our P.R. volunteer, Lee Runion who made personal visits to media outlets, schools, and other organizations while promoting the YE program. Also we have a better handle on social media through FaceBook, which has had good effect.

We extend "super" thank-you's to all the ground and flight volunteers who made this possible. On May 20, we flew 58 kids and 10 adults then June 17 we flew 56 kids and 12 adults. Each of our rallies enjoyed reasonable weather and smooth air. Hooray !

Thanks to all.

The next Young Eagle Rally is Saturday, August 12th at Sequim Valley airport.

John Meyers
YE Coordinator (with great helpers)

Savvy Maintenance: The Rotax 912 is delightfully different

By Mike Busch
AOPA Pilot magazine, June 1, 2017

The past 20 years may have yielded more outside-the-box ideas than any other comparable period in history. The iPod redefined the music industry in 2001. Facebook, YouTube, and Twitter redefined how we interact. The iPhone not only redefined the cellphone, but also changed our lives in too many ways to count. Airbnb redefined lodging, Uber redefined ground transportation, and the iPad and ForeFlight redefined our general aviation cockpits. (Remember when we schlepped around 15

pounds of Jeppesen binders, and spent mind-numbing hours keeping them updated?) Wow!

While all this amazing innovation was happening, a Canadian company's obscure Austrian subsidiary—mostly known for its two-stroke snowmobile, motorbike, and ATV engines—was quietly redefining the small (under 150 horsepower), four-stroke piston aircraft engine. Few U.S. aviators noticed until 2004, when the FAA approved the Light Sport aircraft rule, and sexy factory-built special Light Sport aircraft (S-LSA) began entering the U.S. aircraft registry and showing up at the airshows in Oshkosh, Lakeland, and Sebring.

Nearly all those S-LSAs turned out to have same engine: the Rotax 912. Today, as the LSA rule celebrates its thirteenth birthday, nearly every pilot has heard of Rotax. Yet the outside-the-box nature of its innovative engines remains widely underappreciated outside the Light Sport and Experimental communities.

The Rotax 912 story began in 1989, when the first 80-horsepower engines were shipped to customers in Europe for use on ultralights and motorgliders. Rotax already dominated those markets with two-stroke engines derived from the company's snowmobile product line. But almost nobody outside the ultralight community took notice.

For one thing, Rotax had developed a reputation for building cheap, light, cantankerous, not-very-reliable engines with ridiculously short 300-hour TBOs. For another, the new 912 four-stroke engine had a TBO of only 600 hours—perhaps an improvement by ultralight standards, but hardly acceptable in the world of "real airplanes."

Rotax pressed forward. By 1994, Rotax obtained FAA certification of the 80-horsepower 912, and in 1996, it introduced a turbocharged version (the 914) rated at 115 horsepower. In 1999, a normally aspirated 100-horsepower version for ultralights (912 ULS) was introduced, and an FAA-certified version (912 S) quickly followed. By then, the TBO had been increased to 1,200 hours for the 912 and 1,000 hours for the 914. The engines were selling well abroad, but never gained much traction in the United States.

Everything changed in 2004 and 2005 when the FAA adopted the LSA rule. Factory-built S-LSAs suddenly became all the rage, and the overwhelming majority of them were powered by the Rotax 912 ULS. LSA designers considered it the obvious choice: It was substantially lighter, more compact, and more efficient than traditional 100-horsepower engines (such as the Lycoming O-235 and Continental O-200); was designed to run on unleaded mogas; and by then had a credible 1,500-hour TBO. What wasn't to like?

Finally, in 2009, Rotax upped the TBO of the 912 series to 2,000 hours, and the following year did the same for the turbocharged 914. In 2012, the company started shipping a fuel-injected full authority digital engine control version (912 iS). By 2014, Rotax had delivered 50,000 of these engines. A 135-horsepower version (915 iS), announced in 2015, should start shipping by the end of 2017. It wouldn't surprise me if a turbocharged version of the 915 iS is in the company's skunkworks.

Delightfully Different

If you grew up in a world of Continentals and Lycomings like I did, these four-stroke Rotaxes

take some getting used to. They're different—in a good way. If Rotax made a 300-horsepower version I could hang on my Cessna T310 in place of its Jurassic Continental TSIO-520s that were designed more than a half-century ago, I'd do so in a heartbeat.

First, the engine is astonishingly small and light. The 912 ULS has a dry weight of just 132 pounds, compared to 199 pounds for a Continental O-200-D or 200 pounds for a Lycoming IO-233-LSA. (All three of these engines are rated at 100 horsepower.) Rotax accomplishes this mainly by turning the engine twice as fast: Redline is 5,800 rpm for takeoff and typically 5,000 rpm in cruise. The cylinders can have a lot less displacement because they process twice as many combustion events.

Of course, you can't turn a prop that fast without the prop tips going supersonic (and generating a lot more noise than thrust), so the engine has a reduction gearbox with a 2.43-to-1 ratio. At redline, the prop turns at less than 2,400 rpm; in cruise, the prop turns just over 2,000 rpm. The notion of a geared engine might sound scary, but the Rotax gearboxes have been trouble-free and require no special maintenance other than a 1,000-hour recommended inspection.

Obtaining 100 horsepower from such tiny cylinders at such high rpm creates a cooling challenge. Rotax deals with this elegantly by combining conventional air cooling of the finned cylinder barrels with liquid cooling of the cylinder heads. The engine incorporates a small integral coolant pump and a small external radiator. Coolant volume is only about a half-gallon, so it doesn't add much weight. Liquid cooling of the heads results in far lower CHTs—typically less than 200 degrees Fahrenheit in cruise, with a redline of 275 degrees F.

The ignition system is electronic, powered by dual alternators that are built into the engine. A powerful permanent magnet on the flywheel induces AC current into a pair of stator coils inside the crankcase. The AC is fed to an electronic rectifier/regulator unit that puts out 13.8 volts DC. These dual alternators power the dual solid-state ignition system. They also drive the electronic tachometer (which displays crankshaft speed, not propeller speed).

Oil and gas

The oil system is a bit different, too. Instead of using a wet sump system, with a large oil pan on the bottom of the crankcase like all Lycomings and most Continentals, the Rotax uses a dry sump system employing an external cylindrical oil tank. Instead of relying on a scavenge pump to return oil to the tank—or on gravity like the O-200 does, requiring the oil tank to be below the crankcase—Rotax uses internal crankcase pressure (caused by blow-by of combustion gases) to propel the oil from the bottom of the crankcase to the oil tank.

This demands a novel preflight procedure: Before checking the dipstick to determine the oil level, it is necessary to "burp" the engine by removing the oil filler cap and then pulling the prop through by a few blades until you hear a gurgling sound—which indicates that all the oil from the bottom of the crankcase has been pushed into the oil tank, and only air is left in the crankcase. Once the engine has been burped, you can obtain an accurate dipstick reading and you're assured of a full oil tank at engine start.

Rotax engines have no mixture control knob. Most carbureted ones like the 912 ULS incorporate dual Bing carburetors with a high-altitude compensator that automatically adjusts the fuel/air mixture by sensing pressure altitude. Injected engines such as the 912 iS incorporate a FADEC that accomplishes the same thing.

Perhaps the most delightful difference is that the Rotax is designed to use unleaded autogas, which is significantly cheaper and cleaner than avgas. Using 100LL is permissible but not

recommended. In fact, if the engine is run on 100LL more than 30 percent of the time, Rotax calls for a reduced oil and filter change interval, and increased preventive maintenance. The use of leaded avgas can cause buildup of lead sludge in the oil tank and reduction gearbox, among other bad things. Also, you're not allowed to use all-synthetic oil such as Mobil 1 if you use leaded avgas, because synthetic oil can't hold lead in suspension. Bottom line: Try to use unleaded mogas instead of leaded avgas if you possibly can.

Bulletproof

Lockwood Aviation in Sebring, Florida, is the preeminent provider of Rotax parts, overhaul, and maintenance training in the United States. I had a long chat with Rotax guru Phil Lockwood about the reliability and durability of these engines. Lockwood told me that when Rotax 912s come into his shop for overhaul after 2,000 hours and he tears them apart, it's astonishing how pristine they are inside. After 28 years of incremental evolution, product improvement, and TBO extension, these engines seem to be about as bulletproof as anything in aviation.

Now if they'd only build a 300-horsepower model…..

Available from our Members

Aircraft hangars for sale at the Port Angeles Airport. Newer, well built. Now just $31,000 each. Call for brochure or more information. Alan Barnard, Windermere 360-461-0175

Titan Mustang Kit #162. 70% complete; basically fully assembled up to the firewall. Avionics not installed. Aluminum fuel tanks installed, vice plastic factory tanks. Can be delivered locally without taking off outer wing panels. Log and photos provided. $49,000. Gordon Tubesing 386-569-6524.

EAA Chapter 430 Membership Meeting Minutes

Date: May 27, 2017:
Call to Order @1000 Location: W28 # 10

- Pledge of Allegiance:
- Introduction of Guests. Tracy Boulton, Rebecca Andros.
  New members: Chris Widden from Forks has a PA-12 clone
- Approval of Minutes as published: Approved
- Reports:
  - Treasurer: Harry Cook on web site members section
  - Membership: Bob Hicks 35 members signed in 2 guests.
  - Scholarship: Dave Miller reported that Seth M. has obtained a 3.5 GPA, now in 2nd year. He went to OKC for the high-altitude chamber experience. He also is the school aviation safety advisory committee president.
  - Young Eagle: John Meyers. 58 YE flown with 7 aircraft; Lee Runion helped greatly with publicity, going to several venues, and getting information in to the newspaper.
- Merchandise: John Meyers. Need to sell hats, shirts to raise funds for the scholarship account.

- Activities:
  - June 10th fly out to BVS Skagit Valley Airport
  - June 17th Young Eagles at KCLM 1000-1400
  - June 21st - 23 Collings Foundation war-birds at KCLM.
  - June 24th speaker will be Peter Morton from Boeing
- Project Reports: Dennis Toepke has his Taylor-Craft flying.
- Old Business:
- New Business:
  - Dennis T. brought up EAA VFR club of serious X-C flyers encountering various weather conditions.
  - John Cuny spoke of using basic med and procedures involved.
  - Donations needed for the potluck food jar.
- Next Board meeting will be on June 9th / Mariners Café 0900

Close of the business meeting @ 1040

Program introduction by Paul Kuntz. Dan Masys subject was "All for a spark: from magnetos to electronic ignition". This was a great informative presentation, and very well done.

A heartfelt thanks to the entire volunteer ***Potluck Crew*** for making the event so special.

Respectfully submitted Norm Coote for Ken Brown

Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website: http://www.eaa430.org

If you are a chapter member and do not yet have a login to the Members page, you can register with your email address to create a login at the website.

EAA 430 Flyer

Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

A Little Hangar Flying: July the Month of Fly Ins in the Lower 48

Boy, I tell ya, the summer is just here and the Fly ins are all over the Northwest. Not only here but all over the USA. Too many to go to and get those summer chores done. So you have to pick and chose the ones you want to attend.

I have a Cessna 180 that looks really bad. That's why I'm going to a few fly ins. One is the 180/185 fly-in in the Back Country of Idaho. It's called the Johnson Creek Fly Inn. Mostly 180/185's from all over the US.

Now when I was up in Alaska flying, every place I went to was a back country airport or off airport landing strip. Why do I go to this place? Maybe it's the comradery of the guys with like airplanes! Johnson Creek has a runway in between the hills. The hard part is it's HOT/ HIGH and the WINDS are squirrely. Then there's mean ol' Mr. Density Altitude coming into play. That's the idea of this article this month.

Here's a quick way in the cockpit to check the Density Altitude. Also, some other things to think about and things I've learned over the years.

Take your altimeter and SET the Field Elevation, then set 29.92. See the difference? The 29.92 will give you Pressure Altitude. Now there is temperature. That's where Density Altitude comes into play. Density Altitude is Pressure Altitude corrected for Temperature. You can get the Temperature off your cockpit thermometer. There's a formula that will give you Standard Temperature at any altitude. That's addressed below. Basically the colder the temperature is from standard day the lower the Density Altitude. Vice versa, the hotter it is, the higher the Density Altitude. Sometimes in the winter in Anchorage, Alaska while figuring the Density Altitude we would be way below Sea Level. Great performance.

Next: you can then go to your Aircraft Operation Manual and with this information gained below get the Takeoff and Landing distances needed to make a safe arrival and departure within the

performance parameters of the aircraft. If your loads are too big, then one option is to make two trips to get all your stuff in or out.

Example: Take your flying buddy/wife out last after you see how underperforming the airplane is with all the stuff you needed to camp with. Plus, go in with half tanks of fuel. In other words, fuel for the trip. There's no need to fill the airplane up.

I did just that and took off when the air temp was low in the early morning at a fly in years ago. I also had half tanks. The place was Pagosa Springs, Colorado. Density Alt. when I landed was 11,300 at 1:00 PM. When I took off it was 7800 @ 8:00 AM. (NOTE: Most AWOS will, if listened to, tell you the density altitude to help make those go, no go decisions.)

You can calculate Density Altitude on your wiz wheel/E6B. Wait! No one uses those anymore; I mean the GPS in the airplane. Your laptop or iPad. There actually is an E6B in the bottom of my Flight Bag. For use when the electricity is out and to show people I know how to use one. Go to the performance page. Most GPS's have them. Learn to do it before you go somewhere that is guaranteed to have a higher than normal density altitude. Just be aware of what you are getting into.

Now some simple math…It's the only time in my life I wish I had paid attention in school. Hahaha! I was looking out the window most of the time. But I didn't know I was going to be a Pilot. I just knew I had to find a job that allowed me to look out windows.

The simple math…Ya right. This is a pretty simple formula since two of the variables will always be the same and the other two are easy enough to find. Let's say our current altimeter setting is 29.45 and the field elevation is 5,000 feet. That means (29.92 - 29.45) x 10 + 5,000 = 5,470 feet. That's your pressure Altitude. You can see this by doing what I mentioned above. Know what the field elevation is and put 29.92 in the Colesman window of the Altimeter. The indication will be the Pressure Altitude. Simple. Now let's move on to step two, finding density altitude. Here's the formula:

density altitude = pressure altitude +
[120 x (OAT - ISA Temp)]

Now, before your eyes glaze over, here's how simple this density formula is: we already have the value for pressure altitude from our last calculation; OAT is degrees Celsius read off our thermometer (let's say it's a balmy 35 °C today) and ISA Temp is always 15 °C at sea level. To find ISA standard temperature for a given altitude, here's a rule of thumb: double the altitude, in this case 5000 feet X 2 = 10, then subtract 15. Which is -5. (For example, to find ISA Temp at 5000 feet, we multiply the altitude by 2 to get 10; we then subtract 15 to get -5.

So, in the example above:
density altitude = 5,470 PA + [120 x (35 - 5)]
Working out the math, our density altitude is 9,070 feet.

If you have been to 9000 feet MSL in your airplane you know it is a dog. So plan accordingly.

Now before you get there if the density altitude is way up there. Guess what? So is your landing roll and ground speed due to a higher true airspeed. Your indicated speeds for all operations are the same…Flaps gear etc. What's different is your True Airspeed, which is going to be higher than your indicated speed. Which MEANS your Landing Roll will be longer. 25 % longer for every 1000 feet elevation. So plan on using the first part of the runway not the last part. Fly your airspeeds. See the notes below.

Remember:
PA+{ 120 x (OAT-STD Temp)} = DA

Don't forget to lean for Best Power per Aircraft Operating Manual. Aside from leaning, here are some other tips and some good ideas to consider from Crawford, who operates in Boulder density altitudes that top 5,000 feet 11 months of the year according to yearly temperature averages.

• Trust your airspeed indicator, not your eyes, when landing. Groundspeeds can be up to 20 knots faster than you are used to when using the same indicated airspeed (IAS) required by the pilot operating handbook.
• Fly in the evening or early in the morning when temperatures are lower.
• Call a local instructor at the airport where you are going.
• Before flying to a high-altitude airport, know whether your aircraft climbs more efficiently with the first increment of flaps. Many aircraft do, but your results may vary and that first notch may add more drag than lift.
• Be sure the aircraft's weight is below 90 percent of maximum gross weight.
• Don't fill the tanks (see previous tip).
• Fly shorter legs and make extra fuel stops (tough suggestion to accept, but it results in less exciting takeoffs).
• Be ready to ferry one passenger to a lower density altitude, then come back for the other. If you are unsure of conditions, fly around the pattern once alone without baggage to test your aircraft's performance.
• Have 80 percent of your takeoff speed at the runway's halfway point, or abort. For Crawford, that means having 48 knots IAS in a Cessna 172 at the halfway point.

Just another story. In the B-747 old -100's I was many times shutdown because it was too hot to get off the ground in second segment of Take-Off /Climb to safely depart.

What were our options? Reduce the load…not going to happen! Takeoff on a longer runway. Haven't made one that long!!!. Use another flap setting? Nope, second segment was limited due to engine thrust. So the only thing we could do was wait until the early morning until the temperature went down to a legal number. Then one day or many days in Anchorage the temp is down but the altimeter is so low our performance was out of limits. What options? Reduced the load because the altimeter was not going to come back into acceptable parameters until the next day. We are talking low, lows of 28.76 or so.

So Density altitude is a REAL Serious situation. Pay attention to it.

AOPA has a good online course on this subject at https://www.aopa.org/login/asiCourses/?course=mountainFlying&project_code=&_ga=2.71380435.1561281493.1500646370-1185227085.1500646370

Mike Radford

References:
Density Altitude calculations. Flying Magazine, By Stephen Pope October 25, 2011 reworked by Mike Radford.
Mountain Flying tips AOPA Magazine, July 1, 2007 By Alton K. Marsh

In This Issue

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*Phones area code 360 unless otherwise noted

On the Horizon: Calendar of Events

EAA Chapter 430 meets on the last Saturday of the month, in Hangar 10 at Sequim Valley Airport at 10:00 a.m. For directions and additional information about chapter programs, see the chapter website: http://www.eaa430.org

Date	Topic
Saturday, July 29, 2017 Hangar 10 Sequim Valley airport	Chapter meeting and potluck luncheon. Program: Falconry (with guest falcon present!). Learn how the birds of prey do it…
Saturday, August 12, 2017 10:00 am – 2:00 pm	Third 2017 Young Eagle Rally, Sequim Valley Airport
August 21, 2017 Oregon	Total Solar Eclipse viewing.
August 26-27, 2017 0900-1600 Sequim Valley airport	Olympic Peninsula Air Affaire. EAA 430 members are encouraged to participate in ground display of experimental aircraft. Volunteers are always needed to man the chapter information booth.
September 9-10, 2017 Hood River, OR (4S2)	Fly-out to Western Antique Aeroplane and Automobile Museum show and Fly-in

Scholarship Student Update

Our Scholarship recipient, Seth Mulhausen has just finished his Commercial Pilot course and flight check. Next up is the start of CFI training.

I sent him a Congratulations.

Dave Miller
Scholarship Coordinator

Traveling tool kit: What do you carry in your airplane?

By Mike Busch
AOPA Pilot magazine, July 1, 2017

It's a well-known fact: Most mechanical problems occur between Friday night and Sunday afternoon when you're hundreds of miles from home base. The difference between a minor annoyance and a major travel disruption can hinge on whether you brought along the stuff necessary to get back in the air quickly.

I'm talking about several kinds of "stuff"—service information, a survival tool kit, and spare parts and supplies. I fly lots of long-range missions in my airplane, and I always carry quite a bit of such stuff with me. It has bailed me out of trouble more times than I care to count.

Service information

Service information is perhaps the most important thing to carry. If you have a mechanical problem on a weekend and are lucky enough to find an A&P to help you, he cannot legally work on your airplane without the maintenance manual for your make and model. If it turns out that he needs to order a part to get you back in the air, he'll also need access to the illustrated parts catalog for your make and model to figure out the part number.

Maintenance manuals and illustrated parts catalogs tend to be big, heavy loose-leaf binders. Your best bet is to do what I do: Get a digital copy of your airplane's maintenance manual and illustrated parts catalog, and stash it in the airplane's glovebox or a seatback pocket. Most aircraft manufacturers offer digital versions of their service documents nowadays, and it may also be available from third-party sources. (For example, if you fly a Cessna, check out McCurtain Technology Group at www.mccurtaintg.com.) It's also not a bad idea to upload your digital maintenance manual and illustrated parts catalog to the cloud so you can access it from anywhere using your laptop or smartphone.

It's also helpful to have a list of important phone numbers and email addresses you might need. Make sure you have the phone numbers for your A&P mechanic: work, home, mobile, and maybe the pub where he hangs out on Friday nights. If you belong to an aircraft type club (and you should), make sure you have the club's tech-support hotline number handy. Also, contact information for your favorite parts suppliers.

What about your aircraft's maintenance logbooks? Never carry them in the airplane! The NTSB doesn't want you to, because if you crash they don't want the logbooks to be damaged or destroyed. Your aviation attorney doesn't want you to, because if you're ramp checked he doesn't want the FAA inspector to have access to your logbooks until you've had a chance to make sure all the i's are dotted and t's crossed. I don't want you to, because I've seen too many cases where shops have held an owner's logbooks hostage during an invoice dispute. So keep your maintenance records at home in a safe place, and have any necessary logbook entries made on self-adhesive stickers you can paste into your logbooks when you get home.

Survival tool kit

Creating a survival tool kit to carry in the airplane is an exercise in minimalism. A decent aircraft mechanic's toolbox weighs 400 to 600 pounds and stands five feet tall. In the airplane, you can take only what you think you might need to get home, and nothing more. A survival tool kit has to be light and tight.

The roll-around toolbox I have in my hangar contains 30 different screwdrivers plus two cordless screwdrivers. The survival tool kit I carry in my airplane has only two: a ratcheting screwdriver handle with interchangeable tips, and

a stubby #2 Phillips driver for working in tight quarters.

Likewise, my home toolbox has four entire drawers full of wrenches: sockets, box wrenches, open-end wrenches, offset wrenches, cylinder wrenches, obstacle wrenches, and so on. My survival tool kit makes do with a basic socket set (one-quarter-inch and three-eighths-inch drive) and combination wrench set (one-quarter-inch through three-quarters-inch), supplemented with an adjustable wrench and vise-grip pliers. A few other pliers (regular, needle-nose, diagonal cutters) round out the collection.

In addition to these basics, the most important tools to carry are specialty tools that might be hard to procure locally at a hardware store. Things such as an aircraft spark plug socket and a pair of safety wire pliers. My survival kit also has a wrench designed specifically for removing and installing vacuum pumps (since my airplane seems to have a ravenous appetite for those).

You should tailor your survival tool kit to meet the needs of your particular aircraft, and to conform to your own mechanical aptitude and ambition. How comfortable are you wrenching on your airplane? Do you do your own oil changes? Do you replace your own spark plugs? Because I'm an A&P and fly a complex piston twin, I probably carry more stuff in my survival tool kit than you might want to carry in yours.

Once you figure out what to carry, the next question is what to carry it in. I suggest you avoid traditional metal toolboxes; they're heavy, and can dent or scratch your airplane (or your toe). I like plastic toolboxes from Stack-On (available at Lowe's, Wal-Mart, and Amazon.com). I carry two of these in my airplane: one for tools, and the other for parts and supplies. Another good choice is a "fishmouth" canvas toolbag (available from Klein Tools, among other sources).

Parts and supplies

I bought my first airplane in 1968, a brand-new Cessna 182, and traveled in it a lot, including making a transcontinental trip at least once a year. The Skylane proved to be a very reliable airplane with one exception: It had an old-fashioned mechanical voltage regulator that it "ate" on a regular basis. After the third time I spent the night on a hard airport bench, I decided to buy a spare voltage regulator and carry it in the baggage compartment. Guess what? The airplane never ate another regulator for the rest of the time I owned it. I'm convinced that when you carry spare parts with you in the airplane, they radiate some sort of protective force field that keeps their brethren healthy.

My Skylane had a belt-driven alternator, so I also carried a spare alternator belt, which doesn't weigh much or consume much space. I figured it might come in handy someday, but my airplane seemed to know I was carrying a spare, and so I wound up never needing it.

The Cessna 310 I've been flying for 30 years uses solid-state regulators that never seem to give any trouble, so I don't carry a spare. But my 310 likes to eat vacuum pumps, usually when I'm far from home and dealing with IMC. Because my airplane has deice boots, it uses the big, expensive 400-series vacuum pumps maintenance shops almost never keep in stock. So I carry a spare pump and the special wrench needed to change the pump under battlefield conditions. I also carry a couple of spark plugs; landing, taxi, nav, and post-light lamps; and some fuses.

I carry some strategic supplies: tie-wraps, duct tape, a tube of RTV sealant, a vial of super glue, a length of .032-inch safety wire, some 20-gauge hookup wire, and a crimp terminal kit. Also a few chemicals: spray lubricant, contact cleaner, windshield cleaner, and Simple Green. (There's not much that can go wrong with an airplane that

can't be fixed at least temporarily using tie wraps, duct tape, safety wire, and locking pliers.)

Mini-tool kit for the cockpit

I also carry a mini-tool kit in my airplane glovebox for in-flight use, and it has saved the day for me on numerous occasions. It includes a Leatherman multitool, a miniature locking plier, a jeweler's screwdriver, some Allen wrenches (for removing/installing tray-mounted avionics and tightening knob setscrews), a small adjustable wrench, a folding pocket knife, a small LED flashlight—and, of course, a supply of tie wraps and duct tape. You probably don't want to carry as much "stuff" in your airplane as I do in mine, but you should think about what you do want to carry. You just might thank me next time you find yourself stuck in the middle of nowhere on a Friday night.

Mike Busch is an A&P/IA

Washington Aviation Specialty License Plate now available

The new Washington Aviation Specialty License Plate is available for purchase beginning July 23, 2017.

Purchases may be made online by visiting http://www.dol.wa.gov/vehicleregistration/specialdesign.html or by visiting your local vehicle licensing office.

FAQ's

How much will it cost to purchase a plate?

- Initial cost: $40 for the actual plate + annual tab fees and other specialty license plate production fees
- Renewals: $30 for the renewal of the plate + annual tab fees and other specialty license plate production fees

You can find out the total cost by visiting: http://www.dol.wa.gov/vehicleregistration/specialdesign.html or by contacting your local vehicle licensing office.

What does the money from this plate purchase support?

$28 from each plate purchase will support aviation-specific initiatives such as:

- Airport infrastructure improvements to support statewide disaster response and recovery operations (examples: wildland fires, earthquake, landslide response).
- Economic development opportunities to enhance public access to airports, such as informational kiosks.
- Statewide aviation infrastructure-related awareness programs that promote public participation at airports.

I just renewed my tabs; can I still purchase the Washington Aviation Specialty License Plate?

Yes, typically, you should be able to transfer your registration to the new plate and be charged only for the special plate and processing costs. It is always a good idea to check with your local vehicle licensing office to make sure there aren't any individual/local circumstances that would change this process.

Can I buy an aviation plate as a gift for someone else?

No, not unless you and the recipient are both registered owners of the vehicle. When the plate is available, WSDOT Aviation will offer a Gift

Envelope on the WSDOT Aviation website that can be downloaded, printed and folded to hold enough money for your loved one to be able to purchase a specialty license plate.

For more information regarding the cost of a Washington Aviation License Plate please visit: http://www.dol.wa.gov/vehicleregistration/specialdesign.html or contact your local vehicle licensing office.

Can I personalize my plate?

Yes, for an additional fee, you can use up to seven characters for a personalized plate. Visit http://www.dol.wa.gov/vehicleregistration/sppersonalized.html to learn more about personalized plates and to see which character combinations are available.

Does any money from the personalization fee support aviation?

No, the personalization fee goes toward Washington Department of Fish and Wildlife conservation programs.

If you have any questions regarding the Washington Aviation License Plate, please contact Nisha Marvel, WSDOT Aviation Communications Consultant at MarvelN@wsdot.wa.gov.

Available from our Members

Aircraft hangars for sale at the Port Angeles Airport. Newer, well built. Now just $31,000 each. Call for brochure or more information. Alan Barnard, Windermere 360-461-0175

Titan Mustang Kit #162. 70% complete; basically fully assembled up to the firewall. Avionics not installed. Aluminum fuel tanks installed, vice plastic factory tanks. Can be delivered locally without taking off outer wing panels. Log and photos provided. $49,000. Gordon Tubesing 386-569-6524.

EAA 430 member Mel Rudin is parting out his Velocity, and offers the following components. Contact Mel at rudin@olypen.com or 360-461-1691 for more info:

Avionics (all with trays)

Bendix-King	
KX 155 with glideslope KI 209	$2500
KY 97A Comm	$1500
KT 76C Xponder	$500
PS Engineering audio panel	
PMA 6000 with Marker & Intercom	$750
Approach interconnect IFR/HUB	$325
Approach 18" cables for all of above	$300
Total Assembly	$5875

UMA Instruments Electric 2 1/4 " dia.

Airspeed 40-200 kts	$200
Altimeter 0-10,000 pt scale in/hg VFR only	$150
Manifold pressure 5-35 in/with sender	$125
RPM with sender and tang adapter	$200

Other

Dynon EFIS 10A internal battery and external remote compass	$1250
Lighting dimmer solid state 2 circuits with pots & knobs	$75
Electro luminescent light strips (two) 1.5" x 18" with power inverter	$150
Air/oil separator – RMJ-AERO for Lycoming	$125
Engine mount Lyc/I/O360 for Velocity/Cozy	$500
Usher gasolator- with Curtis valve	$40

Weldon boost pump B81z0-J 4.5 psi	$400
Plane Power Voltage regulator R1224	$90
B & C alternator L-40 with mount bracket	$200
Starter relay	$5
Battery relays (2)	$15 ea.
Odessy Battery PC680 (2)	$60 ea.
Odessy Battery box (holds 2)	$25
Whelen strobe power supply (comet)	$200
Whelen strobe/position lights A600 PG/PR shielded, cables included	$250 ea.
Positech oil cooler - 10 row (2)	$150 ea.
Pitot AN5813-1 24v heated, used on twin Cessna with 9" mast & nose adapter	$750
Ameri-King 12v to 24v converter 551-9	$100
Headsets (4)	$50 ea.
2A shoulder harness "Y" (2)	$30 ea.
3A lap belts, use with 2A (4)	$30 ea.
Diagonal shoulder harness (2)	$15 ea.

MORE TO COME.....

EAA Chapter 430 Membership Meeting Minutes

Date: June 24, 2017
Call to Order @ 1000 Location: W28 # 10

- Pledge Allegiance:
- Introduction of Guests.
  - Peter Morton (speaker)
  - Dave Bennett
  - Andrew Ausherman
  - Aaron Simpson
  - Mike Friend President of EAA 406 @ PWT
    - (meetings on the 4th Wednesday at 1900)
  - Russ Sides (Vancouver WA and past local member)
- Approved Minutes as published.
- Reports:
  - Treasurer: Harry Cook (report will be on the members only web)
  - Membership: Bob Hicks 88 paid members
  - Scholarship: Dave Miller nothing to report
  - Young Eagles: John Meyer Upcoming events:
    - August 12th W28 1000-1400
    - September 16th W28 1000-1400
  - Raffle Manager: Need someone to take this position.
  - Tech Advisor Dan Masys / Jim Cone none
- Project Reports: (members open forum)
- Comments from the Membership:
  - Congratulation to Bud Davies on getting his license.

Close of the business meeting @ 1030
Break for coffee and cookies.

Social Meeting and Presentation:

Program introduction by Paul Kuntz of Peter Morton. Peter's presentation was on the 757/767 common cockpit and what it took to get it done. Very interesting and innovative presentation. Thank you Peter.

Picnic / pot-luck followed and everyone got lots to eat. Always a good time. If you missed it we will be doing it again in July. Mark your calendars and plan to attend.

Needed:

- Activity coordinator, Paul Kuntz is moving to other activities. Thank you Paul and Mary for all your work in providing such interesting programs.
    - This role is very important for the chapter. This is a key to the meetings and our growing membership.
- Raffle chair to run the 50/50. This is fun and very easy. Step up and take this on.
- Coffee wrangler. Handle the coffee needs for the meetings.
    - Pick up coffee
    - Return the containers
- (if we don't get volunteers these activities will be eliminated)

Respectfully submitted,
Ken Brown

Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website: http://www.eaa430.org

If you are a chapter member and do not yet have a login to the Members page, you can register with your email address to create a login at the website.

EAA 430 Flyer

Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

What Happened to all the Airline Pilots?

I'll fly almost anything. This a Gyrsaker Hybrid Falcon.

When I was growing up in Alaska (West Virginia didn't count. Haha, there weren't any airplanes to speak of in WV). Back in the early 70's Vietnam was over and the military was letting pilots out at an alarming rate and the airlines were glad to get them. That isn't so anymore. Then, there were so many pilots it was impossible to get a job without knowing someone. Then deregulation, mergers, layoffs and really messed up the airlines. Some made it for a whole career but many didn't.

When we were kids we grew up looking at the skies and the noise from and airplanes going over, wondering where he was going, what he was doing and what type of airplane is that? General Chuck Yeager from WV was a National Hero breaking the "Sound Barrier". Things like that got kids interested in someday flying. The News was all about aviation and the accomplishments that were going on everyday.

I remember my first flight on an Eastern Airlines Lockheed Electra. Man was I excited. (I later flew them for 12 years) Who knew?

I use "HE" because that's the way it was. Mostly still is a "man's" profession but that is changing. Yes, women do well in today's environment but not then. Get those girls interested. They are such good pilots, very attentive to details and very good relating to other crew members in the cockpit. Very important in todays aviation environment. Don't forget, during WWII women flew the same airplanes men did but NOT in combat. Stereotyping at its best. After the war it was back to the house. Later things changed. Women have just as much opportunity to have an aviation career as men.

So where have all the pilots gone? What happened?

Well, it's a long story but basically kids aren't as curious as they were back then with airplanes. The news media only covers airplane crashes, dang it. And thank goodness, there are less of

those events. Airlines and airplane flights are so common flying is not so interesting anymore.

Oh, it's still interesting to you reading this article, but you got to put yourself into these kids' shoes today. How many times have you seen a kid ask to see inside the cockpit lately? We used to have them up in the cockpit all the time. That's how future pilots are found…looking inside the cockpit as they walk by to the passenger area. The Mom or Dad would say let's look at the cockpit. If some little guy or gal walked by the cockpit door and looked in and any of the pilots ever saw that, we would immediately have asked them to come on in. We would light up the whole cockpit with the warning lights, bells and voices from who knows where! Heck, I still look in the cockpit when I go by.

A friend of mine's son at the age of 31 decided to become a pilot for a living. His Dad is and airline pilot and has been all his life and his son's life. This young man just thought flying was common place. His Dad's answer to the statement was "you could have figured that out 10 years ago." Now here's what you have to do to attain your dream. (Both of Tom Hart's sons did the same thing). But for whatever reason growing up this kid didn't want to be a Career Pilot. Until one day it got him bad. He decided that was for him. Flying was truly for him. It's what he wanted to do. No holding back. Less than a year after the declaration he has his first flying job. Towing banners on the Jersey Shore. What fun! He is now he is on his way. He has a Burning Desire to be a pilot. He will be a pilot. He is a Pilot (Not a Driver). I hate that term. And from what I hear he is a good one (PILOT).

The way I got hired to fly floats with No Float Rating is I had been seen flying all over Alaska and was still alive. That's a good criterion I guess. LOL!

What's cool is during this day and time in aviation history is we have the biggest shortage of Pilots ever.

Now this kid went to Oshkosh for years. Not on the airliner but in J-5's, Brunerwinkle Bird Bi-planes. He even flew his Dad there a couple years ago.

The Young Eagles Program is a great venue to find that one in a 1000 kid that might want to someday pursue an aviation career. It would be nice if the schools offered field days to the aviation museums and airports.

Heck only less than 1% of the populace are pilots. Why? Many don't have the opportunity to get into aviation. Unless! Unless! They have a *burning desire* and are encouraged by their parents, supported by grandparents to be interested in flying, or going somewhere new all the time in an airplane or just being a pain in the ass hanging out at the airport begging rides for washing an airplane, cutting the grass, anything to get money to get a flying lesson. That's what future pilots do.

If the kids just ask for a ride that's cool, but make him work for it. If he is serious he will figure out how to pay for the gas. He'll figure out how to get to the airport, he'll figure out if he works a little and has some money he can get a ride and some instruction.

Heck, my late father-in-law started flying at 16, was a WW II Pilot, and Captain for Alaska. When he figured out he was going to fly DC-3's from Anchorage to Fairbanks and back for several years he started his own airline hauling freight, and Alaska went by the way side. That's right, he didn't actually quit he just stopped flying Alaska's freight and started flying his own. Get it? He loved to see new areas and things on his own terms. He had so many stories we would run out of time every time the family got together for dinner talking about planes and flying. One of his sons is a B-747-400 Captain, the same son's wife was a Bush Pilot and later a B-737 Captain, is Daughter (Kathy) married me, a Bush Pilot and B-747 Captain, Retired. His other Son

is a top Aviation Mechanic, etc. Pilots all around.

I was talking to him one night and found out one of the lakes I was going into in the Brooks Range he flew in all the stuff that I was hauling out some 40 years later. Little did I know that would happen. I did it on Floats in the summer, he flew it in with a DC-3 on skies. How much flight time he had is unknown. He flew all the time. His airplanes, Alaska's airplanes and when times were slow at his place and Alaska, he worked for others at 85 hours a month. As many as three outfits a month or more if he could do it.

Pictures I had of airplanes on my walls at home he would go look at and comment that he flew that airplane. That is the type of interaction the young guys and gals need to spark that fire. The young kids of today need guys and gals to show them how fun flying is. They have to want it though. You can't force it. You could buy them a rating but if they didn't earn it then it doesn't mean as much.

One thing comes to mind of what happened was the pay was so low, conditions of the apprentice so bad, so many regulations rules and so on really stymied many aspiring pilots. But the ones that got consistent support from mentors and had a *burning desire* to be a pilot made it. Many are stories that you would not believe. Like a float plane pilot in the oil fields of Louisiana that got hired at Delta and retired at Delta. From floats to airliners. Go figure… A duster pilot that was making 20 bucks a day flying all day got hired at Delta and retired at Delta. A duster pilot!! Heck they don't know how to talk on the radios. Many Bush Pilots that got hired at Reeve and retired at Reeve were ex-military pilots.

In Alaska Pilots are everywhere. All of us flew to fly and kept at it. Were we or they better than anyone else? NOPE. They just had one thing in common…A *burning desire* to be a Pilot.
Some people say he's a pilot cause he's lazy. That isn't true. Piloting an airplane is work but its so dang fun no one calls it work. Bob Reeve Said: "Flying Beats Work". Yea, ask him that when he was flying his Boeing Tri-motor (now in the Boeing museum) into a mine out of Valdez, AK. And is stuck in the soft snow.
Ya, the Regulations won't get any fewer, the requirements for pilot any less, but the pay is dramatically going up. Supply and demand. I worked several jobs to make a living in this profession. That is not necessary anymore. Starting pay is up like any other trade. Make no mistake, this is a trade. We used to say: "The only way to the Left Seat is thru the Right Seat apprenticeship". As a copilot, I was often reminded I was the only one in the cockpit on OJT (On the Job Training).

Ya, college degrees are still required. I never got one of those. I was lucky to make it out of the 10th grade. But most people aren't working in the field they chose in college anyway. So take that degree put it in your back pocket and go fly your ass off and get the minimum time requirements and never give up on your aviation dream. Don't get caught up in staying at one outfit forever either. But get something out of every job, then move on to what's best for you.

Another thing that happened is, we take flying for granted as a society. It's almost as common as going to get in your car. The pendulum swings both ways. The pilots will once again be respected for what they do. I don't know what happened there but I guess it got so safe and reliable people likened flying to a bus ride. Ya, right. I always thank the pilot for not killing me after landing.

Example, when I was five years old we used to go to the airport to look at airplanes. Before that people used to go to the railroad station and watch trains. Now to get someone to look up to the sky it requires some guy doing loops, rolls, spins, with lots of noise and smoke. I still look up no matter what, just because. So if your talking to me and I hear an airplane I no longer am listening to you. I'm listening to what the

engine sounds like, is it a radial? Which way is the plane going, how high the plane is and what kind of airplane is it. We used to play that game when I was a kid in West Virginia. I bet you did also. Piper, Cessna, Bonanza! Tail Dragger? Wow! An airplane! Look!

In Anchorage, Alaska people actually go to Lake Hood in the long Summer evenings, (the busiest Seaplane Base in the World, ATC Tower Controlled) with a pizza and refreshments, just to sit on picnic tables by the water lanes and watch the float planes come and go. Wondering all the time, what fun are they going to get into? Or grading landings. I am guilty of this many times, as many dates with Kathy started out that way. We later on took our boys and girls to the Lake to watch. By then they were watching me come and go.

I wasn't a float plane pilot when we were dating, but I did have a tail dragger. So she decided I was alright. We would fly that airplane everywhere. Go look at Moose and Bears in the evening, eat lunch on a sand bar somewhere at the base of a glacier, fly down to a secret beach and dig clams, eat lunch on the tail. Then repeat all that with our sons and daughters.

So no wonder three out of five people in Alaska have their Pilots Certificate. Imagine that! Maybe that's the key. If everyone is interested in flying sees people flying everywhere then more kids will be interested. They say you can stand on the street corner in Nome, Alaska, swing a dead salmon in a circle and 3 of 5 people you hit with it would be Pilots. Why is that? Because there are pilots and their planes everywhere you turn.

Airplanes are not Rich Guy play things in Alaska. Airplanes are everyday tools to get to where you need to go. Hunting, cabin, fishing, trapping etc.… Because it's the ONLY way to see the Alaska Bush.

Not all pilots in Alaska are cool, but if you're a pilot in Alaska you're probably cool. Pilots still supply "Bush Alaska" with all supplies needed to live. Pilots landing where they do to bring those supplies is often a landing strip in the middle of no where. Or a small no name lake or creek. If you could not land you would carefully throw the supplies out. Sometimes it worked good; sometimes the supplies landed in a thud and broke all over the place. Like the live turkeys Reeve Aleutian Airways threw out of a DC-3 to the villagers on St. Paul Island one time just before thanksgiving. Not knowing turkeys don't fly well. Note: Reeve had DC-3 rigged with a mail drop system because in the early days there wasn't a runway on St. Paul Island.

All villagers and all the kids turn out to see the plane and the pilot upon landing. Ha, I have NEVER seen a Pilot not show a kid the airplane no matter how big a hurry he was in. The villagers all want to shake your hand. Asking, do you have newspaper? The answer always from me was, yes. Everyone shakes your hand for landing with their glove off. (The custom in the Alaskan Bush in winter when shaking hands is to take your gloves off). I have refused to shake peoples hands here in the Lower 48 if they offer their hand with a glove on. Just habit.

If you want to FLY, you will find a way. If you really want to learn HOW to FLY, go to Alaska. Tom Hart used to say: "Flying the Chain" (the Aleutians) was a good place to learn HOW to Fly. If you know a kid or grand kid take them to the airport. It doesn't have to be a Young Eagles program, just you showing your enthusiasm towards aviation and playing games with them in the car maybe just enough to get them going. See you at the airport I'll be the guy looking up at the sky.

Again, get a kid excited about flying. She or he may or may not continue an aviation career but you did your part in exposing the Fun and Joy you have in flying.

Don't forget the Air Affair coming up this next weekend. It's getting bigger and bigger every year. Good weather or not, show up.

I still think there ought to be an Outhouse Flour bombing contest.

Mike Radford

In This Issue

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On the Horizon: Calendar of Events

EAA Chapter 430 meets on the last Saturday of the month, in Hangar 10 at Sequim Valley Airport at 10:00 a.m. For directions and additional information about chapter programs, see the chapter website: http://www.eaa430.org

Date	Topic
August 26-27, 2017 0900-1600 Sequim Valley airport	Olympic Peninsula Air Affaire. EAA 430 members are encouraged to participate in ground display of experimental aircraft. Volunteers are always needed to man the chapter information booth.
September 9-10, 2017 Hood River, OR (4S2)	Fly-out to Western Antique Aeroplane and Automobile Museum show and Fly-in
September 30, 2017 Sequim Valley Airport Hangar 1o	Monthly EAA 430 chapter meeting. Program TBD.

Eclipse 2017!

By Paul Kuntz, John Meyers, Dan Masys, Andy Sallee, John Cuny, and Ken Brown

The Great American Eclipse on August 21, 2017 was widely advertised as a once-in-a-lifetime event, and the path of totality crossing our nearest neighbor Oregon made it a natural magnet for EAA 430 aviators. Here we offer the trip reports and photos of chapter members who

flew to it, flew through it, and drove to see it from the ground.

From Paul Kuntz:

In May 2017, right after I realized there was going to be a total eclipse, I ran across the web site for the FBO at the Madras OR airport, saying that they were taking reservations for the large number of aircraft expected to fly in for the event. Being right on the centerline of the path of totality, Madras was a prime target for eclipse watchers from all over. I booked a spot, which covered the period from Thursday through Tuesday. I figured it would be OK to fly there on Sunday morning, observe the eclipse on Monday morning, then fly back to Sequim Monday afternoon. A primary objective was to minimize the number of nights camping out by the plane, since Mary is definitely not a camping enthusiast and I need to do what I can to maintain her tolerance of my airplane obsession. During the week leading up to the eclipse, the weather was looking good for the entire area, but the persistent forest fire haze was a bit of a concern.

On Wednesday the FBO sent out an email notice with a NOTAM for the arrival procedure and temporary tower, not unlike Oshkosh, but with assigned arrival times. I had put a Sunday arrival in my reservation, so I was assigned an arrival time of 12:12 PM, amongst a constant stream of arrivals every three minutes over a several hour period. I didn't like that prospect, so I talked to Mary, who agreed that we should move our Madras arrival to Friday.

So, we left Sequim at 1130 on Friday for an uneventful flight over the top of a fairly solid undercast that ended at the Columbia River, then clear skies into Madras, between two fire fighting TFR's -- one to the north and one to the west of the airport, about 25 nm away. On arrival the temporary tower was not operating yet, and there were only about twenty aircraft lined up in what was described as "grass" on the web site, but was more accurately "dirt with potholes".

Paul with Pipistrel and tent

There was an adequate number of port-a-potties on hand, several food vendors, and a large number of optimistic booths pedaling eclipse t-shirts and assorted memorabilia. There were no showers, but the FBO was very friendly and accommodating, and had their office and restrooms open from 5AM to 10PM every day. They had a beer garden of sorts in one of the two large hangars, where they had local bands playing music in the evenings (not bad, actually). There were a number of shuttle bus routes to and from the town of Madras and into surrounding areas. In addition to people camping by their planes, the airport had places for drive-in tent and RV camping. A huge encampment of tents and RVs was located on a large farm a couple of miles north of the airport, which held probably ten- or twenty-thousand people, and another large encampment on the fairgrounds in town. By then end of the day on Friday, there were still less than fifty aircraft tied down.

On Saturday morning a few more planes began straggling in. Mary and I took the shuttle to town, visited the fairgrounds briefly, walked through the town for a look around, had some lunch and eventually caught the shuttle back to the airport, where we hung out at the beer garden and talked to some of the others who had flown in from California, Oregon and Washington. There was growing vehicle traffic on all the roads in the area, with long lines entering the camping areas. By Saturday evening about 150 planes were on the ground, including a few jets and light twins. The crowd was still pretty sparse at the

airport, however, which was disappointing all the food and merchandise vendors.

On Sunday aircraft arrivals began picking up, eventually developing into a steady stream of arrivals very minute or two. We spent about three hours at the Erickson Aircraft Collection, located in a large new hangar at the airport. They have a very nice collection of warbirds, including some rare examples (P-39, P-40, Japanese Oscar, P-38, PV-2, Martin Mauler, Grumman Duck and more). Most are flyable. Late Sunday afternoon they flew a P-38, P-40, Corsair, P-51 and P-47). By Sunday evening the available parking space on the airport (ramp, gravel and dirt) was full of airplanes and tents.

On Monday morning, everyone was up early and hustling to get camping gear packed in the airplanes while setting up chairs and various forms of camera equipment to observe the eclipse event. More airplanes began arriving about 5 AM, including several charter jets that offloaded VIP passengers into a couple of large semi-trailers that appeared to be equipped with air conditioning and refreshments to keep the VIPs cool and contented while us common folk lounged in the dust. The FBO personnel managed to squeeze in twenty or twenty-five aircraft more than their planned max capacity.

Darkness approaches Madras from the West

The edge of the moon began to appear over the disk of the sun shortly after 0900, with totality occurring at 1019. Aircraft arrivals continued until about 1000. The smoke from forest fires created a slight haze that was pretty thick to the west, but it was not evident looking east toward the sun. I wasn't equipped to get useful pictures of the eclipse itself, but I took an interesting slow motion video with my iPhone of the shadow sweeping in from the west. It was about four or five seconds from the time the shadow hit Mt Jefferson (27 nm west) until we were in totality at the airport.

The ambient light level did not start to dim noticeably until the sun was nearly fully covered perhaps two or three minutes before totality. In the last 30 seconds the air temperature began to drop noticeably. During totality it felt more like dusk than night, with a couple of planets visible. The sight of the sun's corona was absolutely awe-inspiring, with streams of light extending outward to two or three sun diameters from the black disk where the sun should have been. Pictures just don't capture the experience of being there in person. After just over two minutes of totality, a bright flash of light at the edge of the black disk brought the light level quickly back to normal, and then it was a somewhat anticlimactic rewind of the preceding hour as the moon moved on to the east. By 1130 it was all over and the scramble to depart began.

The FBO had the departure pretty well organized, and handed out slips of paper on Monday morning prior to the eclipse, with block departure times for 15-plane groups. Our early arrival on Friday got us a slot in the second group, departing at 1200. We were packed and ready to go, so as instructed we pushed the plane back and swung it around to line up between lines of parked aircraft. After the first group began to move out, I started my engine, but then had to sit for five or six minutes until my Rotax oil temperature was warm enough to let me add the nearly full power that it took to break free of the divots in the dirt that my wheels were sitting in. The Cessna pilot next to me who was trying to get out of his parking spot wasn't happy, but there wasn't much I could do about it. We taxied across the dirt to the paved taxiway and lined up,

then had to sit for about 30 minutes while several VIP jets were cleared to back taxi one by one all the way from the opposite end of the runway, turn around and take off. I guess they all had places to be and things to do, but meanwhile I was worriedly watching my CHTs climb steadily into the yellow. Fortunately as I was about to shut down, the temps began to stabilize and held just short of the red until the parade of Gulfstreams, Lears and Citations concluded. After that, the good folk in the temporary control tower got us on our way quickly. By 3 PM we were on the ground back in Sequim. I'm certainly glad we weren't part of the miles of bumper to bumper traffic we could see on the roads below us.

Paul and Mary in Madras

Was it worth the trip? Absolutely! In addition to the spectacular eclipse experience, we met a number of very friendly and very interesting people from around the US and a few foreign countries. The small staff at the FBO did a phenomenal job of preparing for, and pulling off, a very significant logistical challenge. Mary is glad that we went, and was a good sport throughout, but after three days and nights of portapotties, bugs, snakes, no showers, sleeping on rough ground with a barely adequate air mattress, and changing clothes in a tent just tall enough to sit up in, she has made it crystal clear that camping is the other once-in-a-lifetime experience that she chalked up on this little adventure.

It's nice to be home again with some great memories to cherish.
Cheers,
Paul

From John Meyers:

Trip Report – Flying to and from ECLIPSE 2017 – Oregon Coast

The Pacific Northwest weather window was good for Eclipse viewing trip from home (WA59 – Rakes Glen) to vicinity of Newport on the Oregon coast, Monday August 21, 2017. We departed around 8 am. with Chehalis (KCHS) as an intermediate destination. Skies were clear although we looked down upon foggy spots over Puget Sound. Our mission objective was to enjoy the event along the line of “totality” then scoot back home.

We landed KCHS as comfort fuel stop… added 5 gallons… not much but also was a reset for biological needs to plan non-stop into eclipse, then home with no stops. The departure timing was calculated to arrive just north of Newport OR with 10 minutes to spare. Several planes departed KCLS with same idea in mind.

Enroute to ONP VOR, we observed lots of traffic visually or on traffic device heading south. I learned a new term for the various tablet or installed traffic displays… now called “fish-finders” (heard on ATC).

We flew at 7500’ and arrived just north of ONP VOR to stake out our piece of the sky … and loiter for a few minutes awaiting the event. There were about 6 airplanes in our proximity as indicated on fish-finder. Now and then we could catch a visual on traffic. Up high, there were contrails indicating some unusual turns by those observers.

From Chehalis, I communicated with SEA Center for traffic advisories. They were really busy and declined others of flight-following soon after we were on frequency. North of ONP VOR, he announced "radar service terminated"… very understandable. We found the alternate Center frequency serving ONP and Salem… and just monitored that busy channel. I had a video and audio recorder running to capture the event with moderate success in the end.

[Editor's note. Note: See John's real time cockpit video and radio and cockpit audio on YouTube at:
https://www.youtube.com/watch?v=GVo5eV0RQZI&feature=youtu.be
Hint: it gets verrry interesting at about 8 min and 30 seconds into the 13 minute video…]

During our delay orbits, we could see the onset of shadow… thence totality. We headed eastbound with the shadow … darkness was upon us. There was twilight around the full horizon, the distant volcanic peaks of Hood and Jefferson glowed orange.

On the radio, there were a few exclamations of joy and wonder as the event unfolded, interspersed with the usual ATC functions. Up high, several airliners requested 360's to share event with passengers. As totality abated, we were treated to the diamond ring effect bathing us in something that looked like light from an arc lamp. Then all was back to normal.

Ooh's and Aah's were shared with wife and self during the event. As we headed north, someone on frequency thanked ATC for putting on such a fine show !

We joined Dan and Linda Masys for lunch at 0S9 on the way home… we didn't know they were out there with us, but enjoyed debriefing and sharing the eclipse experience upon return to home turf.

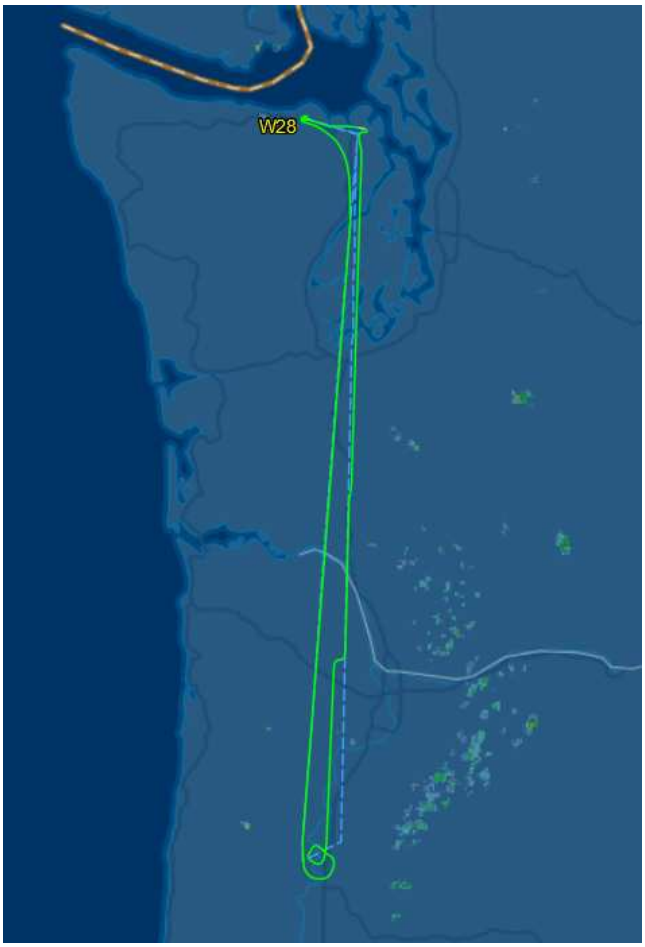
Eclipse glasses on, John and Allirie Meyers and RV-6A at Spruce Goose for post-eclipse repaste

John Meyers

From Dan Masys:
Paul Kuntz' descriptions at EAA 430 chapter meetings of his experience of the 1979 solar eclipse made it seem like a not-to-be missed opportunity! Since my wife Linda and I have always taken time to view meteor showers, unusual conjunctions of planets and the moon, and other cosmic entertainment, we put it on the calendar for August 21 many months ago.

At the same time, the prospect of clogged roads and price gouging locals in the path of totality made a surface trip unappealing, so we decided to just wait till the appointed day and see if the weather would be flyable. Flyable it was, and we planned and flew a course almost due south, crossing the centerline of totality just a few miles south of Salem, OR.

The online flight planner predicted an hour and 23 minutes enroute on a line that would put us about ten miles beyond the eclipse centerline, and our plan was to turn back to the northeast to put the moon-on-sun at 45 degrees to the right of our course line, for Linda to get the best photos. (Like everyone else, we found getting good eclipse photos, especially from a moving aircraft, is just about impossible without special lenses and filters, so we just have mental pictures of the most spectacular sun views.) We lifted off from W28 at 8:50 a.m. and headed south.



Flight track of N104LD to eclipse centerline and back, from Flightaware.com

We had unexpected tailwinds at 11,500 and were cruising with a groundspeed of just over 200 mph, which was too fast, so we pulled the throttle back to lengthen the time enroute. (I can't believe I just wrote that; first time ever wanting to go slow on a cross country.)

Linda dons the eclipse glasses to check progress of the moon's shadow across the sun.

Right on schedule, at 9:05 the moon began to eat an ever larger crescent out of the sun. We expected it to get progressively darker over the next hour, but as everybody else has observed, daylight persisted till the sun was more than 95% covered, and it was only in the last 2-3 minutes that dusk became gray and then became night time. Both the onset of totality and its end seemed shockingly fast. Being on the centerline we got a full 2 minutes and 1 second of complete coverage of the sun, but the experience seemed like 30 seconds!

Sunshine off to the east, night time above

Within ten miles of the centerline of totality, we also encountered a swarm of traffic! It was good to have ADS-B out and traffic display from ADS-B in, because there were targets to dodge at all IFR and VFR altitudes, including a hot air balloon at 10,500 feet that became completely invisible when darkness came. Yikes!

Balloon on its way to becoming invisible at 10,500 feet.

I had thought that by being up at oxygen altitudes we might have some room to spare, but there were relatively high speed targets moving in all directions.

Descending to avoid traffic conflicts near Salem, and picking up more as we descended…

I am also glad we were not listening to the Center frequency as John Meyers was, because if I heard the transmission "jumpers away!" in the darkness of totality over the Willamette valley, the pucker factor would have gone up quite a bit!

Viewing the sun at totality defies being captured on film, since the eclipse viewer is being plunged into a surreal environment that envelopes one completely, and the intensity of the black disc surrounded by a thin, brilliant white rim is both too dark and too bright for cameras to register correctly. That makes the in-person experience all the more memorable.

Our flight back to the northern Olypen was uneventful, and on landing at Jefferson County we were delighted to meet up with fellow eclipse flyers John and Allirie Meyers returning in their RV-6A. Comparing notes from our flight experiences that morning, it was clearly thumbs up all around.

Dan Masys

Andy Sallee

From Andy Sallee, we got a short note saying simply that he flew through the eclipse at 37,000 feet. On a little further investigation, what Andy meant was that he and wife Jane were on the special Alaska Airlines flight that departed Portland early Monday and headed out over the Pacific to view the eclipse at 'first touchdown', when the angle of the sun was low. As far as we know, the Sallee's were the only ones from Sequim to get liquor-filled boxed chocolates and a visit to a donut wall as part of their eclipse experience.

Andy and Jane join the fellowship of eclipse glasses Selfies aboard Alaska Airlines.

The unique night sky with distant sunshine at totality, from 37,000 feet.

John Cuny represented the ground troops of EAA 430. On behalf of the Flower Power generation, he and wife Sherl drove to camp on the ranch of friends in Amity, Oregon in their VW microbus. John writes:

The trip was great. We had a perfect spot. Total eclipse! Wow, what a sight! I couldn't get any good photos of the eclipse but I'm sure you have seen many. We did have a great time and as a topper we got to see this magnificent herd of elk on the way home.

Oh, and here's John's eclipse Selfie:

The astute reader will note that no pictures of the actual eclipse, whether partial or total, were submitted by our "totality goers". For those we are indebted to Ken Brown, who stayed home in Sequim and captured these:

And the many moons projected on his house siding, pinhole camera-style:

Thanks to all who contributed their words and photos for this fun, rare astronomical event!

Available from our Members

Garmin GTX 327 transponder. Solid state 250w digital transponder, 380 hrs TTSN, current model, removed from RV-12 during avionics upgrade. New costs $1850.00; this one yours for $500. Includes installation manuals, tray, connectors, operating manuals, assistance with installation if needed. Dan Masys dmasys@uw.edu or 360-797-3260.

Aircraft hangars for sale at the Port Angeles Airport. Newer, well built. Now just $31,000 each. Call for brochure or more information. Alan Barnard, Windermere 360-461-0175

Smith Mini Biplane kit, construction of body and wings completed. Need a winter project? Sheet of AD 2024 025 Alcad included for cowling. Call 360-681-7427 with reasonable offer.

Titan Mustang Kit #162. 70% complete; basically fully assembled up to the firewall. Avionics not installed. Aluminum fuel tanks installed, vice plastic factory tanks. Can be delivered locally without taking off outer wing panels. Log and photos provided. $49,000. Gordon Tubesing 386-569-6524.

EAA 430 member Mel Rudin is parting out his Velocity, and offers the following components. Contact Mel at rudin@olypen.com or 360-461-1691 for more info:

Avionics (all with trays)	
Bendix-King	
KX 155 with glideslope KI 209	$2500
KY 97A Comm	$1500
KT 76C Xponder	$500
PS Engineering audio panel	
PMA 6000 with Marker & Intercom	$750
Approach interconnect IFR/HUB	$325
Approach 18" cables for all of above	$300
Total Assembly	$5875
UMA Instruments Electric 2 1/4 " dia.	
Airspeed 40-200 kts	$200
Altimeter 0-10,000 pt scale in/hg VFR only	$150
Manifold pressure 5-35 in/with sender	$125
RPM with sender and tang adapter	$200
Other	
Dynon EFIS 10A internal battery and external remote compass	$1250
Lighting dimmer solid state 2 circuits with pots & knobs	$75
Electro luminescent light strips (two) 1.5" x 18" with power inverter	$150
Air/oil separator – RMJ-AERO for Lycoming	$125
Engine mount Lyc/I/O360 for Velocity/Cozy	$500
Usher gasolator- with Curtis valve	$40
Weldon boost pump B81z0-J 4.5 psi	$400
Plane Power Voltage regulator R1224	$90
B & C alternator L-40 with mount bracket	$200
Starter relay	$5
Battery relays (2)	$15 ea.
Odessy Battery PC680 (2)	$60 ea.
Odessy Battery box (holds 2)	$25
Whelen strobe power supply (comet)	$200
Whelen strobe/position lights A600 PG/PR shielded, cables included	$250 ea.
Positech oil cooler - 10 row (2)	$150 ea.
Pitot AN5813-1 24v heated, used on twin Cessna with 9" mast & nose adapter	$750
Ameri-King 12v to 24v converter 551-9	$100
Headsets (4)	$50 ea.
2A shoulder harness "Y" (2)	$30 ea.
3A lap belts, use with 2A (4)	$30 ea.
Diagonal shoulder harness (2)	$15 ea.

MORE TO COME.....

EAA Chapter 430 Membership Meeting Minutes

Date: 7/29/2017

- Jim Rosenburgh presided (President in Alaska on a family matter)
- Pledge Allegiance
- Introduction of Guests
- Total attendance was 26 members and 9 guests.
- Guests were:
  - Roy Runyon
  - Tom McDonald
  - Tracy Boulton
  - Wayne Pinger
  - Greg Shippie
  - Mike Hersey
  - Mike Friend (EAA 406)
  - Richard Pearlman
  - Jerry Stiles.
- Approve Minutes:

  - Revisions/Corrections as published in the newsletter:
- Reports:
  - Treasurer: Harry Cook Total of the accounts is $5896
  - Young Eagle: Lee Runion (August 12th W28)
  - Tech Advisor Dan Masys
- Project Reports: (members open forum)
  - James (Composite's lab will be having an open house on Saturday 8/26 at KCLM to show and tell. Fun outing.
- Old Business: none
- New Business:
  - Volunteers to help with the booth setup at Air Affaire and to staff the booth.
- Comments from the Membership:
  - Dan Masys gave a short commentary on the ADS-B rebate program and a short how-to (based on his recent experience) on the process to achieve the requirements for the rebate. Q&A followed.
    - FlightAware.com if you create an online IFR flight plan your ADSB will be tracked
    - PlaneFinder.net for following friends
  - Next Chapter Meeting- (August / dark) September 30th
  - Next Board meeting Mariner's Café August 11th 0900-1000
  - Air Affaire August 26-27th (Saturday & Sunday)

Close of the business meeting

There was no presentation. Falconry presentation was not available and DVD player not found for backup video presentation.

Announcements:

- There will not be a chapter meeting in August. The Air Affaire (8/26-27/2017) will be our monthly meeting. Volunteers are needed to setup the booth (8/25th) and staff the booth for the 8/26th and 27th. In addition, the chapter would like to have airplanes on static display at the booth.
- Next BOD meeting will be on August 11th at the Mariners Café
- Volunteers are need for the following chapter positons:
  - Programs & Activities chairperson
  - Coffee Wrangler (everybody likes coffee and cookies)
  - Raffle Manager (if we want this activity)
  - The Chapter Secretary positon will be on the ballot for 2018

Potluck followed.

Respectfully submitted,
Ken Brown
Secretary

Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website: http://www.eaa430.org

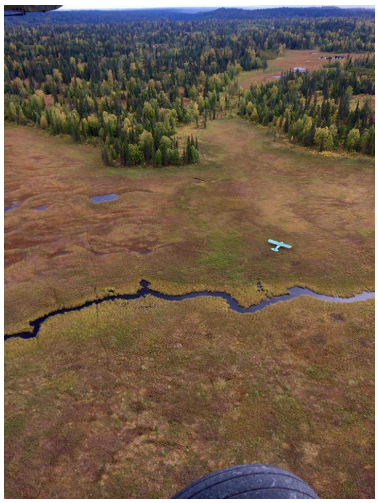
If you are a chapter member and do not yet have a login to the Members page, you can register with your email address to create a login at the website.

EAA 430 Flyer

Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

What do we find Acceptable in our Personal Aircraft condition and Personal flying? What are we willing to get used to?

Remember… what you Take Off/Depart with Wrong, never gets any better!



This young guy is really good.
I mean that in every sense of the statement. His head is on right and he's a good Pilot.
Airplane engine threw a rod.
Big tires saved a flip over.
Only way out is helicopter sling load..

Boy I tell ya, you want to learn what people think is OK in aviation, go fly with them.

My background comes from 40 plus years of check rides, standardization and learning constantly from other pilots on what they have learned and are willing to pass on. I tell ya that alone can save a lot of time and money.

In Alaska where I learned to fly, there was a TV show on the Aviation Weather Channel (after the detailed weather of the whole state was over) a program that was called "Hangar Flying" with Tom Wardly. Toms not around anymore but his contribution to Aviation Safety in Alaska will last forever. He's an Alaskan Aviation Hall of Fame Member.

If guys like Mr. Wardly are willing to pass their and others knowledge on, you must really think about what and why they are telling you. Listen carefully to what it is they are talking about. Is it just passing on info? Or did they see you or someone screw things up so bad they couldn't help themselves to mention it to ya in a nice way. Like this happened to me one time.
Well, In Alaska there are sooo many ways to get in trouble and maybe, just maybe if we talk about these things we can maybe, just maybe help someone not get hurt.

One time on Lake Hood in the Middle of Winter I was getting ready to go flying. Two guys come slugging thru the snow to say whatever to me. They had clip boards…ya they were the FAA. They asked if I was going flying. Would I like a pamphlet on bush flying and a "new" carbon monoxide indicator? I said, heck ya! We talked and I thought about that all the way to the No Name lake to deliver some dog food to a guy. That's really cool I thought. They have put together a how to do it. Or this will make you think instruction manual I can read on the way to the lake. Seriously, that's what it takes. Get out and see the pilots, exchange how to's with them and here's what to think about information. Good Job, FAA.

Here's a good one. Don't go thru a tight mountain pass down low the first time through. Even on A CLEAR DAY!!! Ha, go high then the next time go thru lower. But not so low you can't turn around. Seems obvious, right? Nope, In Merrill Pass there are 66 airplanes dead. From DC-3's to helicopters.

This subject is so vast there isn't enough time or space on this computer to get it all down. So where do I start. When does the readers eyes glaze over? What does the reader really need to know? Who is the group you are talking to and what is their level of experience? This article is just to spark your curiosity to learn as much as you can. Some on your own some from others. I always ask at our EAA meetings, Who, in the group flew into the EAA meeting? Who, is still flying an airplane? Who has an airplane they are working on?

Some guys and gals are not flying anymore but still have stories to tell about their flying days. What they did in certain situations and how it worked out.

What got me on this subject is I flew my airplane up to an airport to get some metal work done and the young man that was doing the work was a new pilot. He built a great C-170. Spared no expense as far as I can see. There are 70 mods and STC's, this airplane isn't a normal 170 anymore.

Now this young airman has about 70 hours taildragger time. He flew his finished airplane to Oshkosh and won the Lindy Award. He flew it there with an instructor pilot and one other passenger. Can you imagine flying your fresh built airplane to Oshkosh? To the "Big Show" for everyone to see. Then enter it to be judged!!! So, on one side you have a guy like that working on your plane which is great! Then you are getting a ride back to your airport with a brand new fresh tail dragger pilot. Total time 200 hours. 70 Tailwheel. Ok, airplane isn't bent so must be ok, right?

I always ask a guy I'm flying with where you been flying? Been flying long? Where'd you learn to fly? How much time you got in this plane?

So, there I was, getting into a beautiful airplane with ALL the bells and whistles for a flight back to the house. He could have landed in my field out front. The airplane could, not him.
Well, I'm pretty critical. It's gotten worse as I get older.

I've had guys hand the 747 to me at 1500 feet in the clouds on an ILS one and a half dots off course and a dot high, you got it! he said!!! That was a checkride for him! So, to alleviate situations like that I have become a lot more proactive. Oh, I was calling the deviations out but he was not correcting. I was about to take over. He beat me to it, he gave it to me, LOL!!! I always watch how guys or gals handle the airplane on start, taxi, run up, radios, T/O, Climb, cruise, decent, approach, landing and taxi to parking. You see it starts with the preflight. Ends with the airplane parked and tied down. Right from the start I could tell mostly what the instructor worked on was landings. The actual act of keeping the airplane straight down the runway. How? He taxied fast and with the brakes only. He told me he almost put it on its nose one time.

The instructor did a good job of keeping him straight on the runway. But my goodness he was all over the system from airspace understanding to airplane engine operation of power and airspeed altitude to mention a few. No set way of doing things.

Remember what I said about standardization? This guy is a Private Pilot not an ATP. He's learning. He's forming habits. Things I take for granted he may have been taught but he was behind the airplane. Like asking ATC If he can transit certain airspace and knowing the altitude limits for that transit. (NO PLAN) ATC is there for ME. They are there because I am flying.

What if ATC tells you to maintain VFR at or above altitude over their airport like Navy Whidbey? Then you look and that altitude is in the clouds. What now? You got to have a plan. That plan changes all the time while you are flying.

What if…you are so high on approach you try and SAVE the approach and end up touching halfway down the runway. What should you have done? Are you mentally able to go around? Or have you got away with saving the approach a bunch of times? But here's something that can be positively rewarded. Go around and complement the act. Talk about it on the ground. Well we were high and the words came out of my mouth…" You're High". To my happiness he went around… Yea! But was he going to try and SAVE it if I had not said that? After the go around was very well executed he never pulled the power back. Remember 'fly the airplane?' Remember I said, 'a great Approach/Landing is a small price to pay when the alternative is a smoking hole in the ground.' Standard flight management of aircraft limits and procedures etc. is paramount.

Two or three miles from the airport I mentioned he maybe should pull the power back after the go-around. This kid was so far behind the airplane he would have never got hurt in the accident.

I guess it comes down to money. You wouldn't skimp on the build of your engine, or the repair of your airframe. So why on earth would you skimp on your knowledge of ATC, flying techniques, and all that goes along with aviation. Can he get up to speed? Yep and I'd help. I'd trade my knowledge for maintenance. I can keep him alive. But I won't coddle him. This is serious stuff. Do it right and do it right all the time. Don't think you can rewrite the damn book. How long will it take? Couple hours a day for a life time. Fly then talk about flying. Fly some more and debrief. Go home sleep do it again. Tom Hart used to tell me fly as many airplanes as you can. So here I was a few years later flying a 747, DHC-2, C-180, C-185, C-206, Citabria, C-150's, C-172's all at once. Ferrying airplanes all over.

Guy asked me the other day, "How do you fly skis? Is there a check out of some sorts?" The answer is go do it and nope. But first I would talk to a bunch of ski pilots and learn and start out slow. Oh, and take one of those guys with you. Why? You might ask? Well, it's simple…two people can dig and airplane out of deep snow and pack a runway with snowshoes easier than one. Oh! You forgot your snow shoes? Shame on you. LOL!!! Your facing a stand of trees and can't back up. Where's your saw? Don't have one? Saw a Beaver like that one day.

On Skis at Six Pac Lake, Mt. Denali on right Mt. Foraker on left. Snow over 5 feet deep.

I get all the magazines and read all the articles. When I was growing up in the IFR environment I got all the periodicals like IFR mag, Aviation safety, AOPA, ALPA, EAA magazines and I read books and just as important I listened to the Pros and the Bush Pilots that were and are still alive. I recently re-upped a magazine I had not subscribed to for a long time called Aviation Safety.

There sure is some good information out there.

These old guys are retiring. Now they have time to write and attend meetings that their local aviation groups put together. They are now more than ever passing on their knowledge. These are for the most part not instructors. These guys did it. Oh, they may have been Instructors or Check Airmen at their respective airlines, but not in the primary instruction phase of instruction. Which is mostly left to a CFI that is building time for the aviation job. Those CFI's have learned the basics but NOT the real stuff. Now an old airline guy that is an active instructor is a gem.
So, I guess my point is, if a fellow long-time aviator or aviatrix that regularly flies and that is flying for a living is talking or tells you or mentions to you how to better do something, you might want to listen.
This young man called me back after he got home and said "Thanks for the pointers." Wow, he said "I did what you mentioned and it worked." No one ever told me that. That was the best payment I've gotten.

N9207C at Wild Lake, Alaska. Brooks Range. Above the Arctic Circle. Good approaches from over the water both ways.

So, you want to fly around the back country and land in off airport places. Do you know how to fly over the landing area and determine how long the landing site is? Do you know what to look for on the ground, on approach and departure? Do you paint a picture in your mind's eye on how to get in and out? Can you hit your land spot every time? Well, these are the things that are talked about in Hangar Flying and in Books. Books will talk about doing it. Pictures on You Tube show guys doing it (but they don't show how many times the Pilot messed it up) Old guys can show you and tell you HOW to do it. Also, more important tell you what got them into trouble. Like the time a young guy saw a You Tube video of a guy water skipping in a cub or 180. Then he goes out to do that dumb act in his airplane. The next thing he knows he's blowing bubbles in water upside down. Or relate a story of how a buddy of theirs got into trouble.

A buddy and I were flying to gravel bars and landing in brush. He said I learned to keep my elevator faired when taxing around. He then offered why. It's to keep the brush out of the area that the elevator meets the horizontal stab. Why you might ask? So, he didn't have to try and get sticks out of the elevator in the air that are jamming the pitch control device. Wonder how he learned that? One of two ways. He got bitten or some ol' guy told him and HE LISTENED!!!!!

If you go to an unfamiliar airport and you're on the ground do you read the signs at the end of the runway for noise abatement? Here at Sequim it says 1000 feet turn left for a Rwy 27 departure, no mid field takeoffs. What else as home field operators can we do to keep the noise down? My airplane has a Seaplane Prop. It's loud! So, I pull Power and then the Propeller back to "Climb Power" as soon as I can. I also don't put the prop back in until the RPM on the Tach. falls off. Usually below 80 kts. or on short final. Nothing worse than some guy or gal in a 185 putting the prop knob to "High Pitch" on downwind at 120 kts.

Anyway, keep learning, keep flying, pass on your valuable experience to the youngers.

Take a trip around the USA! 43 hours, 15 days. Lots of Hotels and gas. LOL! My girls three years later are just now talking about it. I drug all my kids with me flying around. Whether to a fishing hole, camping, Caribou hunting, or just to go see friends and family.

I got inspired to fly around the country by a Colonel I used to fly with in the Alaska Air Guard. I've done it three times in small airplanes.

Mike Radford

In This Issue

EAA CHAPTER 430 2017 BOARD & OFFICERS

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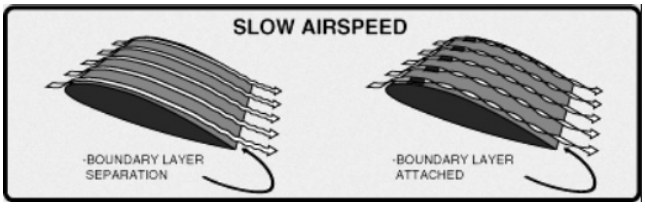
Membership	Bob Hicks	452-9399
Merchandise	John Meyers	477-1354
Young Eagles	John Meyers	477-1354
Scholarship	Dave Miller	452-7136

*Phones area code 360 unless otherwise noted

On the Horizon: Calendar of Events

EAA Chapter 430 meets on the last Saturday of the month, in Hangar 10 at Sequim Valley Airport at 10:00 a.m. For directions and additional information about chapter programs, see the chapter website: http://www.eaa430.org

Date	Topic
September 30, 2017 Sequim Valley Airport Hangar 10 10:00 a.m.	Monthly EAA 430 chapter meeting and potluck. Program by Charles White of Micro Aerodynamics on Vortex Generators and their effects on aerodynamics.



2017 Young Eagles Wrap Up

From John Meyers:

We hosted 4 Young Eagle Rallies during 2017... had good weather each time. Numbers as follows:
May 20 . . . 57 kids
June 17 . . . 54 kids
Aug 12 . . . 76 kids
Sep 16 . . . 41 kids

Grand total is 228 rides for 2017. Thanks to all of our chapter volunteers!

Available from our Members

Garmin GTX 327 transponder. Solid state 250w digital transponder, 380 hrs TTSN, current production model, removed from RV-12 during avionics upgrade. New costs $1850.00; this one yours for $500. Includes installation manuals, tray, connectors, operating manuals, assistance with installation if needed. Dan Masys dmasys@uw.edu or 360-797-3260.

Aircraft hangars for sale at the Port Angeles Airport. Newer, well built. Now just $31,000 each. Call for brochure or more information. Alan Barnard, Professional Realty Services 360-461-0175

Smith Mini Biplane kit, construction of body and wings completed. Need a winter project?

Call 360-681-7427 with reasonable offer.

Titan Mustang Kit #162. 70% complete; basically fully assembled up to the firewall. Avionics not installed. Aluminum fuel tanks installed, vice plastic factory tanks. Can be delivered locally without taking off outer wing panels. Log and photos provided. $49,000. Gordon Tubesing 386-569-6524.

EAA 430 member Mel Rudin is parting out his Velocity, and offers the following components. Contact Mel at rudin@olypen.com or 360-461-1691 for more info:

Avionics (all with trays)

Bendix-King	
KX 155 with glideslope KI 209	$2500
KY 97A Comm	$1500
KT 76C Xponder	$500
PS Engineering audio panel	
PMA 6000 with Marker & Intercom	$750
Approach interconnect IFR/HUB	$325
Approach 18" cables for all of above	$300
Total Assembly	$5875

UMA Instruments Electric 2 1/4 " dia.

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3A lap belts, use with 2A (4)	$30 ea.
Diagonal shoulder harness (2)	$15 ea.

MORE TO COME.....

EAA Chapter 430 Membership Meeting Minutes

No chapter meeting in August due to Air Affaire. Next meeting Saturday, September 30, 2017.

Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website: http://www.eaa430.org

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EAA 430 Flyer

Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

Let's go across the Border?

Have you flown across the Northern or Southern Boarder of the USA Lately? I have! I've done it 12 times. Always a GREAT ADVENTURE! Going was easy. Really easy. I went North to Canada. I took the corporate airplane up to get painted and some other new items installed and upgrades done. There's a 25-28% dollar savings.

The reason I went to Canada:

As delivered Friday Oct. 13

Friday Oct. 20

Getting there was the easy part. Coming back into the US in an auto with a Canadian driver was really interesting. It seems the Border Guards don't understand us Pilots. Big question was how did I get there (Canada) and not get my passport stamped by customs. Couldn't figure out how I just cleared by a phone call. I have to educate them every time. Once thru and done with the 10 th degree of questions and they figured out I wasn't a threat to the USA, they let me back in.

The (eAPIS)Electronic Advance Passenger Information System

Let me back up a bit. First thing I did was to get on the eAPIS web site. I then went over the procedures. It's easy a but requires some reading. As the terms may be a little foreign.
NOTE: You MUST let CBP know you are leaving and coming back into the USA. You MUST let Canadians know you are coming into their country Via a Flight Plan with US FSS and CanPass.

You need to get a eAPIS authorization code and that's easy. It will stay with you as your code forever. But here's one thing that always gets me. I had to get a new code because my other one was so old it went to the big dark hole in the sky.

In that code, they give you a bunch of letters and a maybe a couple numbers. But the 0 and O look alike. They know that and phonically spell out the Code they give you. APGA0RFK (Alpha Papa Gulf Alpha ZERO Romeo Foxtrot Kilo). I didn't pick up on the ZERO. So, it took a few times to log on until I caught my mistake. I thought the phonic program that was beside the code they gave me was kind of weird. Now I know why they put it there.

But it's not really that difficult. So, go to the web site and read and fill out the paper work. You will notice that they want a manifest. If you are the only person on the flight its easy. But if you're not, then you're going to need everyone's passport information. So, have their information with you. Or have them on the phone when you fill out the form. In my case it might be a little more confusing as I am not the owner of the plane my wife Kathy is. I am the "Pilot". So, read real close. If you ferry airplanes to Alaska this will come into play -- being the Pilot and not the Pilot/Owner.

Once all the paper work is done and electronically submitted you will get a "Cleared to Go" message in your e-mail. It will come immediately. You can do all this at one hour before but I got up early and did it because I read slow, being I talk slow.

The next step is to get on the phone to flight service 800-WX BRIEF. You will need to inform FSS that you are going to Canada. You will need to file a flight plan. Have all your flight plan information all written out it will speed things up in filing. Then they will tell you to open your flight plan when airborne on a frequency like 122.55. At the time of opening the flight plan they will give you a Squawk Code to use if you are not talking to the Approach Control Facility like Victoria Radar. I like to land at Abbotsford and clear Canadian Customs. So, if you can't talk to Approach Control and get a code from them then squawk the code they give you when you open your flight Plan with FSS. Got all that?

Then there is another phone call you have to make to let the Canadians know you are coming. It is called CANPASS. Really easy straight forward. They will want to know when and where you are departing from and landing in Canada and your destination in Canada. Somewhere in there they want to know when you expect to cross the border.

All these phone numbers are in the information on the eAPIS Web Site.

Then off you go. I departed from Port Townsend because I like to eat breakfast there. After I departed OS9, I called FSS and opened my flight plan and he gave me a squawk code; I would use this code to cross the Canadian border. I read the code back and away I went. I contacted Whidbey Approach and he gave me a squawk code and I proceeded north to Canada. That lead to a hand off to Victoria Radar. They didn't want to talk to me really. He handed me off to Bellingham Tower. So, I contacted Tower and because I wasn't talking to Victoria Radar and they had terminated radar service when they told me to contact Bellingham Tower. I put in the discrete code from FSS for the border crossing. Simple. A little busy, but fun.

I landed at Abbotsford after a couple circuit changes, from a left downwind to a right downwind. Here's the great part. The tower is so nice and helpful. They gave me progressive taxi to the Shell FBO (big sign) and there's a phone outside on the wall and a big CUSTOMS sign with arrows to make sure you see that. Shut down the plane, get out and call in your arrival to Customs. The tower has already closed your flight Plan. Customs will ask you a few questions. Make sure you have your passport with you because they ask for the passport number. They then give you a number, copy it down and keep it with you. YOUR IN!!! Yea! Now what?

Call Flight Service and file flight plans everywhere you go. It's required. It's the law. You are a guest in their country. If you going further north, for instance, to Alaska, you'd better be prepared for just about anything. Airports are far away from town. Not only that, they are far away from each other. Don't arrive so late you can't get dinner or a ride to the hotel. There is NO VFR at NIGHT in Canada. Don't even try. You can land after dark, but when the sun goes down the IFR program comes out.

Please remember that gas stops are few and far between in the NORTH. So, fill up at every stop. Remember, two hours out and the weather comes down you have to fly two hours back. If you think you're going to go around a snow squall, think again. You fly the mountain passes in the Canadian Rockies. You follow the ALCAN highway. The highway takes the lowest route and it's beautiful. It is by far the safest route to Alaska. Please don't go IFR. You will miss everything and truly the mountains are too high. I encourage everyone to get in your planes an go to Alaska. It's so fun. If that is too far then just get in and go to Abbotsford. Go up to Pentictin in the Okanoghan.

Maps. Ya, get some maps. Even though you have a great GPS, get the maps. The highway map is a good one. WAC charts are great. You can most of the time pick up a Canadian Supplement in some operations room that is out of date but still good to have.

I got a little off the "just going to Canada." But once you get across the Canadian/US border you may just want to keep on going. If you do, the US Customs in Alaska is a Phone Clear Program also.

Gas price? Who cares? You can't buy that much fun for any less. It's the same as it is here. In Alaska it's cheaper in Anchorage. But in Port Alsworth, AK it's 8.00 a gallon. Bettels, AK, the same. But guess what? It's been that price for 10 years plus. I'm going up (I hope) this next summer. Anyone who wants to tag along is welcome.

We have a great Holiday Season coming up! Get those reservations in for the Christmas Party.

Mike Radford

In This Issue

EAA CHAPTER 430 2017 BOARD & OFFICERS

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Newsletter editor	Dan Masys	797-3260
Membership	Bob Hicks	452-9399
Merchandise	John Meyers	477-1354
Young Eagles	John Meyers	477-1354
Scholarship	Dave Miller	452-7136

*Phones area code 360 unless otherwise noted

On the Horizon: Calendar of Events

EAA Chapter 430 meets on the last Saturday of the month, in Hangar 10 at Sequim Valley Airport at 10:00 a.m. For directions and additional information about chapter programs, see the chapter website: http://www.eaa430.org

Date	Topic
October 28, 2017 Sequim Valley Airport Hangar 10 10:00 a.m.	Monthly EAA 430 chapter meeting. Program on **Glass Panel Installations** by David Weber, Product Design Engineer for Dynon Avionics.
November 18, 2017 Sequim Valley Airport Hangar 10 10:00 a.m.	Monthly EAA 430 chapter meeting. Program by Charles White of Micro Aerodynamics on **Vortex Generators and their effects on aerodynamics**.
December 2, 2017 Cedars at Dungeness Legends Room, 5:00 pm	EAA 430 annual Holiday Party. Details below.

Annual Holiday Party

EAA 430 & CCPA members:

You are cordially invited to join your fellow members to attend our annual Christmas dinner at the Cedars At Dungeness golf course on Saturday, December 2, 2017 starting at 5 pm.

THE CEDARS AT DUNGENESS
LEGENDS ROOM

Please send an email to secretary@eaa430.org if you plan to attend, including the number of attendees and your selection of a main dinner course for each attendee (see below). Bring cash or a check made out to EAA Chapter 430. We are required to provide a committed headcount no later than November 20th, and the chapter will be required to pay for the committed number regardless of the actual attendance. Accordingly, if you RSVP, please do attend as we are on the hook for cost of your attendance.

Please respond no later than November 20th

Location:
The Cedars at Dungeness Golf Course
1965 Woodcock Road
Sequim, WA 98382
Date: Saturday December 2nd
5:00 PM No host bar
6:00 PM Dinner

Dinner Options:
1. Prime Rib $33
2. Stuffed Cod $32
3. Vegetarian Lasagna $16

(Note: cost includes tax and gratuity)

gain this year we will have a special guest with us. Santa Class will be collecting for Toys For Tots. Please remember to bring a gift for children who are less fortunate.

NavWorx calls it quits

From the AOPA website October 20, 2017, by Mike Collins

Beleaguered avionics manufacturer NavWorx Inc. has closed its doors, according to a message posted on the company's website Oct. 19. The company's primary product, the ADS600-B universal access transceiver (UAT)—which provides both Automatic Dependent Surveillance-Broadcast (ADS-B) Out and In capability—was the subject of an FAA airworthiness directive June 6. Since then, the company had been working to certify a modified Gen 2.0 UAT using a different WAAS GPS position source.

ADS-B uses GPS satellites instead of ground-based radar to determine aircraft position, and is a fundamental technology behind the FAA's Next Generation Air Transportation System, or NextGen. The FAA has mandated ADS-B Out equipage for flights after Jan. 1, 2020, in airspace where a transponder is required today.

"The ADS600-B Gen 2.0 product utilizes a GPS module from a third-party vendor," said the statement on the NavWorx website. "Although the vendor represented their GPS module met 14 CFR 91.227, the FAA recently determined the GPS module does not meet 14 CFR 91.227.

"We are unable to sell the ADS600-B, or provide AD updates, for either certified or experimental aircraft. Therefore, we are not currently conducting any business and have ceased operations. We will provide updates if they become available," the statement concluded.

NavWorx's distributor, Dallas Avionics Inc., said that it has discontinued distribution and support of all NavWorx products. "Over the past year, Dallas Avionics, Inc. has made every attempt to facilitate the success of NavWorx and support of their customers. Unfortunately, under the current conditions and outlook, we can no longer continue to provide this service," said a statement on the Dallas Avionics website. "All pre-orders for NavWorx products, repairs and upgrades received by Dallas Avionics, Inc. will be canceled effective immediately."

Neither NavWorx nor Dallas Avionics responded to requests Oct. 19 for comment on the closure.

In order to install an ADS-B Out unit in a certified aircraft, the manufacturer must produce sufficient data showing, to the FAA's satisfaction, that the product meets the applicable requirements—even if the manufacturer itself has already made that determination. "At this point, it's not clear whether the GPS module does not comply with the FAA's ADS-B rule requirements, or if compliance could not be demonstrated—which could happen if the required GPS performance data was not available to NavWorx," said Justin Barkowski, AOPA director of regulatory affairs. "Regardless of the reason, the closure puts some NavWorx customers in a tight spot."

The AD's final rule prohibits the use of the WAAS GPS position source built into the affected UATs. By Jan. 11, 2018, owners of aircraft with the affected UATs must couple the UAT to an approved GPS position source or disable the UAT by pulling the circuit breaker and placing a placard in full view of the pilot.

Since the final rule was issued, three pilots received FAA approval for alternative methods of compliance (AMOCs) for the AD, which authorize several Garmin WAAS GPS navigators as position sources for NavWorx UATs. The AMOCs were updated in September to include additional navigators, and now are available to owners of aircraft equipped with any of these Garmin products: GTN 625, 635, 650, 725, and 750; GNC 420W and 420AW; GPS 400W and 500W; and GNS 430W, 430AW, 480, 530W, and 530AW.

Other position sources could be used with the NavWorx UAT. It is approved for use with the NexNav mini LRU GPS receiver. The NexNav mini has a list price of $1,996 through the end of December, when it increases to $2,180. The receiver can be ordered through any Aspen authorized dealer.

The Freeflight 1201 WAAS GPS receiver also should be compatible, but it does not appear that the NavWorx/1201 pairing has been approved by the FAA. The Freeflight 1201 is priced at $2,895, which might be cost prohibitive for aircraft owners who purchased UATs for $2,000 or less.

The AD originally proposed by the FAA in October 2016 sought the removal of NavWorx's ADS600-B and non-TSOed ADS600-EXP UATs from an estimated 800 general aviation aircraft in which they had been installed. It is not known how many aircraft will be able to utilize the available AMOCs.

EAA 430 tech counselor addendum by Dan Masys:

The last couple of years have shown that making an ADS-B OUT transceiver is relatively easy for manufacturers, but qualifying GPS position sources with the FAA is hard and expensive. There are optimistic start-up vendors out there who are currently claiming their GPS units meet the FAA specs called out in 14 CFR 91.227, but they have not yet received FAA approval. Buyer beware! Check the FAA ADS-B website at https://www.faa.gov/nextgen/equipadsb/equipment/ before you buy anything.

It is currently looking like the overall most cost effective packages are single unit transponder systems with an internal approved GPS, such as the Garmin 335. Such systems may have higher unit purchase prices, but these are usually offset by much simpler and lower cost installation.

Available from our Members

Aircraft hangars for sale at the Port Angeles Airport. Newer, well built. Now just $31,000 each. Call for brochure or more information. Alan Barnard, Professional Realty Services 360-461-0175

Smith Mini Biplane kit, construction of body and wings completed. Need a winter project?

Call 360-681-7427 with reasonable offer.

Titan Mustang Kit #162. 70% complete; basically fully assembled up to the firewall. Avionics not installed. Aluminum fuel tanks installed, vice plastic factory tanks. Can be delivered locally without taking off outer wing panels. Log and photos provided. $49,000. Gordon Tubesing 386-569-6524.

EAA Chapter 430 Membership Meeting Minutes

Date: September 30 2013

Call to Order @ 1004
Location: W28 # 10 by President Mike Radford

- Pledge of Allegiance
- Introduction of Guests. We had three guests today.
- No Minutes to Approve for August since we were DARK
- Reports:
    - Financial Report: Harry Cook reported funds totaling $5300+ in all accounts.
    - Membership: Bob Hicks not present: Membership is about 85 currently with 2 new memberships this month.
    - Young Eagles: John Meyers gave a summary and thanked all the volunteers and pilots for their support of the program.
    - Scholarship: Dave Miller. The chapter is current on its payments to the college.
- Project Reports: Several folks talked about what they are doing. Paul Kuntz talked about adding O2 to his motor-glider for trips above 6000. Reported that it makes a big difference.
- Paul Kuntz spoke about the acquisition of a borescope and the advantages of cylinder inspection. Harry Cook (A&P) also commented on the use of the borescope during annual / condition inspections. It is good to know what the inside looks like.
- Old Business: None
- New Business: None from the board or membership

Close of the business meeting @ 1035
Break for coffee
Presentation by Mike Radford & Ruby the red tail hawk. Mike is an apprentice falconer. His presentation and talk were most interesting, with many questions from the membership. Meeting adjourned at 1200 with Burgers and Potluck.

Next chapter meeting October 28 - 1000 at W28
Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website: http://www.eaa430.org

If you are a chapter member and do not yet have a login to the Members page, you can register with your email address to create a login at the website.

EAA 430 Flyer

Experimental Aircraft Association Chapter 430 Serving Sequim, Port Angeles and the Northern Olympic Peninsula.

Volunteers are the KEY to any Organization!!

Thank You for All You Do.

Gosh, I tell ya, volunteers are the backbone of any organization like we have going here at EAA 430. Plain and simple, we have such a great group of enthusiastic volunteers I am truly thankful to be involved with these men and women.

We have a decent place to hold meetings. There are a great bunch of folks that help set up and tear down after the meeting. There are even some folks sweeping the floors to my surprise.

One person brings some wood for the warming of the hangar. Others get the coffee, the cookies etc. When its summer out there is a great group of folks that put on a great cook out. Hamburgers, hot dogs, all the trimmings and deserts. YUM! One volunteer does all the cooking and does a great job of it.

Then let's get the Young Eagle Program. We have a volunteer and his wife that makes sure everything is put together. I have seen him and his wife out putting the signs for the event. He and his volunteers researching the best way to get the word out and getting commitments from pilots to show up with their prize possession, to safely share the Joy of Flight with youngers. These pilots make sure their airplanes and their skills are up to the task of flying safely all day. They put together a flight path and altitudes so as not to wake up sleepy Sequim.

To all the people that get the event underway and making a seem less transition from all the paperwork when these super excited kids and parents walk up to the booth, to the walk to the airplane for the flight. This requires a ton of co-operation from all involved.

Then you have the actual flight. The Pilots are working all month making sure they are current and in good health along with the same for their airplanes. As Tom Hart always said: "Takeoffs are Optional but Landings are Mandatory." So, a lot of time, gas, oil, have been put into the event of flying safely around Sequim.

Bill Sheppard and I Flying his Aero 145
A Twin Engine Tail Dragger built in Czechoslovakia. The only one flying in North America

Then there are the Volunteers who, through a lot of work, got our charitable paperwork in order so folks could donate to the Chapter and get a tax deduction. Well done folks!

We had some great fly outs organized to local airports to see some great airplanes. Not to mention the fly out to see the Eclipse.
A couple guys got together one day in the last few weeks and painted the Tetrahedral so it stands out. I think it's the brightest one I have ever seen.

We have a member volunteer that fixed and then did the maintenance on the Rotating Beacon, that had been inop for years. He rebuilt the darn thing and then had an article showing how he did it and for crying out load how many revolutions it would make before it would need the bulb replaced. As I remember he was dead on that estimate.

We have a Board of Directors that meets every month to plan the actual meeting. These events all take time and planning.

We all benefit from this and in my opinion, we have a great group. It always amazes me that when some volunteer has had enough for a while, someone else steps up and helps out.

So, I implore everyone to get involved with this EAA 430 Chapter. The success depends on you. Come to the meetings. Buy a hat. Get involved. Thanks! What can you bring to the table to make this an even better organization?

Looking forward to a great Christmas Party on December 2, 2017. Be there. Get your reservations ASAP, come see ol' friends and make some new ones.

Looking forward to an even better 2018!

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Mike Radford

In This Issue

EAA CHAPTER 430 2017 BOARD & OFFICERS

PRESIDENT	Mike Radford	907-360-8182*
Vice –PRESIDENT	Jim Rosenburgh	681-0973
SECRETARY and Website Editor	Ken Brown	681-8796
TREASURER	Harry Cook	907-978-8750
Events & Programs	Lee Runion	425-282-9122
Tech Counselor	Dan Masys	797-3260
Newsletter editor	Dan Masys	797-3260
Membership	Bob Hicks	452-9399
Merchandise	John Meyers	477-1354
Young Eagles	John Meyers	477-1354
Scholarship	Dave Miller	452-7136

*Phones area code 360 unless otherwise noted

On the Horizon: Calendar of Events

EAA Chapter 430 meets on the last Saturday of the month, in Hangar 10 at Sequim Valley Airport at 10:00 a.m. For directions and

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LEGENDS ROOM

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2. Stuffed Cod $32
3. Vegetarian Lasagna $16

(Note: cost includes tax and gratuity)

gain this year we will have a special guest with us. Santa Class will be collecting for Toys For Tots. Please remember to bring a gift for children who are less fortunate.

Young Eagles End-of-Season Report

We hosted 4 YE Rallies during 2017... had good weather each time. Numbers as follows:

May 20 . . . 57 kids at W28
June 17 . . . 54 kids at KCLM
Aug 12 . . . 76 kids at W28
Sep 16 . . . 41 kids at W28

Grand total was 228 rides, plus a few accompanying adults.

The following is a list of volunteers who participated in one or more 2017 rallies:

PILOTS & PLANES 2017
1) Barry Halsted (RV-7A)
2) Jim Rosenburgh (C-172)
3) Dan Ramberg (C-172)
4) Paul Kuntz (Pipistrel Sinus 912)
5) David Miller (RV-6A)
6) Gordon Tubesing (PA-28)
7) Ray Ballantyne (Glastar)
8) John Meyers (Citabria)
9) Lee Runion (Citabria)
10) Jim Bettcher (Glastar)
11) JD Crow (R22)
12) Dan Masys (RV-12)
13) Emily Westcott (C-172)
14) Dennis Toepke (15AC)
15) Ruth Rosenburgh (C-172)

GROUND CREW 2017
1) Donna Summer
2) Dan Donovan
3) Lee Runion
4) Linda Runion
5) Joan Miller
6) Joan Masterson
7) Tracy Boulton
8) Bob Hicks
9) Ken Brown
10) Alliree Meyers
11) Harry Cook
12) Bud Davies
13) Cheryle Sullivan
14) John Meyers (coordinator)

Sorry if we missed someone. These are persons that signed-into our volunteer log for one or more YE events in 2017.

Rosenburghs and Ramberg carried the most YE's; a combination of 4-seats, the most sorties, and they flew all rallies. Thanks to all!

John Meyers
EAA 430 Young Eagles Coordinator

uAvionix Begins Shipping Wingtip ADS-B Solution

Installation can be completed in 10 minutes or less.
From Flying Magazine, by Rob Mark
October 24, 2017

The ticking clock toward the FAA's ADS-B Out compliance date hasn't slowed one iota. Come January 1, 2020, aircraft that today require a Mode C transponder, but do not by that date have ADS-B Out installed are no longer legal to fly in that same airspace. The avionics industry is of course bracing for a flurry of activity from operators who waited until the last minute to make the update.

Just in time, uAvionix has released the first of its skyBeacon wing-tip ADS-B Out solutions to help pilots meet the compliance date. At $1,499, the unit is not just affordable, it's also simple to install. Think a screwdriver, a pair of wire cutters and perhaps a few bits of electrical tape simple … and oh yes, maybe 10 minutes of installation time. The secret to the skyBeacon's ease of installation is that it's a direct replacement for the teardrop shaped red position light already attached to thousands of U.S. aircraft. The skyBeacon system only works here in the states.

The uAvionix skyBeacon's wingtip unit is available now for experimental aircraft. The company says certified aircraft can expect the product by spring of next year through an STC uAvionix is finalizing with the FAA. The skyBeacon makes the aircraft not only UAT ADS-B Out compliant, but includes an integrated WAAS GPS, a wireless connection to any Mode C transponder, support for autonomous mode and of course, an LED nav-light replacement.

A version of skyBeacon with an integrated strobe light is also planned.

SkyBeacon's mobile application for a smartphone simplifies setting the unit up once it's installed by automatically configuring the ICAO address, emitter type, aircraft length, width and GPS offsets, as well as accessing the aircraft registration information stored online.

Available from our Members

Aircraft hangars for sale at the Port Angeles Airport. Newer, well built. Now just $31,000 each. Call for brochure or more information. Alan Barnard, Professional Realty Services 360-461-0175

EAA Chapter 430 Membership Meeting Minutes

Date: October 28th 2017
Call to Order @ 1004 Location: W28 # 10

- Pledge of Allegiance.
- Introduction of Guests. Several guest were present.
- Approval of minutes for September as published in the newsletter: as published.
- Reports: will be found in the members section of the web site. If you don't have a login contact Ken Brown the web wrangler at ken@tscwa.com
- John Meyers mentioned an ongoing discussion will be held to consider the number of Young Eagle events we will hold in 2018. Volunteer & pilot fatigue is a factor.
- Project Reports: Several members discussed the state of their projects. Lots of activity in the chapter.
    - Harry Cook hung the wings on his piper.
    - RV14 Project by Dave Miller / Bill Benedict is moving forward
    - Wayne Pringer presented an overview of his book **Angel's Diamonds** Piloting Alaska
- Old Business: as follows:
- Mike Radford announced the list of officers as recommended by the Nomination Committee:
    - The committee recommends the following individuals to stand for election for the offices of the chapter are;
        - President: Mike Radford
        - VP: Jim Rosenburgh

- Treasurer: Harry Cook
- Secretary: Ray Ballantyne

- The Committee will entertain motions from the floor:
  - No additional volunteers wanted to stand for any of these offices.
  - There being no additional nominations - the nominations are closed by a Motion with second. Voice vote, Yea's have it. Nominations Closed. A quorum was present. (32 had signed in)
- The Election of officers will be at the Chapter November meeting on the 18th. All members can vote in person at the meeting or by returning an absentee ballot. The Secretary will emailed the membership absentee ballots in November.

- Please RSVP for the Christmas Party if you plan to attend or not. Lee would like to hear from everyone.
- If you have not received your email invitation please let Lee Runion (rleerunion@comcast.net) or Ken Brown (ken@tscwa.com) know.
- New Business: None from the board or membership

Comments from the Members: It is suggested that a confirmation notice be sent when an RSVP has been received by the chapter for the holiday party.
Close of the business meeting @1022 (note of next meeting being one week earlier because of Thanksgiving and the election of officers for the board)

- Break for coffee

Social Meeting:
Program: Introduction of David Weber from Dynon Avionics (Product Design Engineer)

Dave gave a wonderful presentation and outlined the basic steps to follow when considering the glass panel. The basics are include

1. Mission
2. Budget
3. When to purchase
4. Installation guides
   a. Using tools such as Solidworks and templates from Dynon

Reminder: the next meeting is one week earlier than normal because of Thanksgiving.

Next Chapter Meeting
November 18th - 1000 at W28
ELECTION OF THE BOARD OF DIRECTORS for 2018

If you are unable to come to the meeting please use your absentee ballot. We must have a quorum for a legal election.

Note: General Membership meeting minutes are now included in the monthly Newsletter. Minutes of the monthly Board meeting are also available to chapter members via login at the *Members only* page of the chapter website: http://www.eaa430.org

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