Volume 27 issue 4

THE SLIPSTREAM

THE NEWSLETTER OF GREEN RIVER EAA CHAPTER 441 KENT, WA

April 2025

Next Meeting

Thursday, 24 April 7 PM

This Month's Program

VFR Sectional Chart Review

Are you really sure where the boundaries of the Class B airspace are? Any new symbology that might confuse you? Kellen Rothfus will review the VFR charts.

If you no longer want to receive the newsletter, email me at ron@wanttaja.com

President's Column

Currency and Proficiency

For pilots, the most basic currency requirement for carrying passengers is 3 takeoffs and landings in the last 90 days, and have a current Flight Review. We all know that doing that meets the letter of the law, but we also know that doing only that does not necessarily make one proficient. Further for instrument flight, the regulations require 6 approaches, holding, and tracking electronic signals each 6 months. Similarly, being "current" is not the same as being "proficient".

As we come out of the "workshop season", and embrace the "flying season", it's important for us to remember to accomplish both: currency AND proficiency. Get current, then go fly with someone who can help you get more proficient. Flying is both a cognitive activity and a set of motor skills. Both will atrophy with time.

Just as important, is currency and proficiency of the hardware itself. Maybe the last annual was done last fall, but then the airplane sat idle all winter. As homebuilders (with repairman certificates), we are empowered to do our own maintenance. But as homebuilders, we also have more insight than the average GA pilot regarding the machines we're operating. USE that insight. Be very thorough with the preflight early in the season...look EVERYWHERE.

Let's all be safe, and not contribute to the safety record Ron keeps track of.

Speaking of Ron, he has announced that he will be moving away from Puget Sound. What that means is that while he can edit and send newsletters from his new home (and is willing to do so during a "transition" period), it's in our best interest to find a local newsletter editor. I'm sure Ron will be willing to contribute from time to time, but we really need someone to step up, and now is the time. Ron has a format that works well. There are a number of people who contribute regularly. The editor's job is to cajole us into meeting some form of deadline, and providing something. In addition, everyone in the chapter can benefit if the editor goes out and looks for additional stories. Give it some thought, and please raise your hand. Talk to Ron or myself.

Our April program will be our very own CFI Kellen Rothfus providing us with a review of VFR sectional charts. He wanted to do it last month, but illness kept him from that. He's reported to be healthy now, so come prepared to learn.

Brian

About Chapter 441

Chapter Officers

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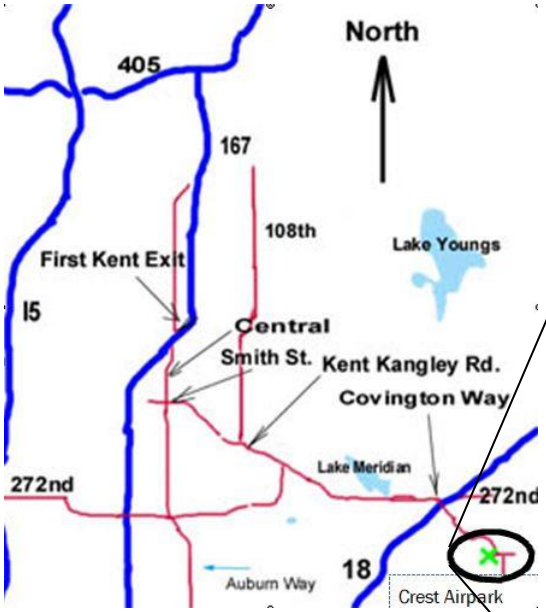
What did we talk about Last Month?

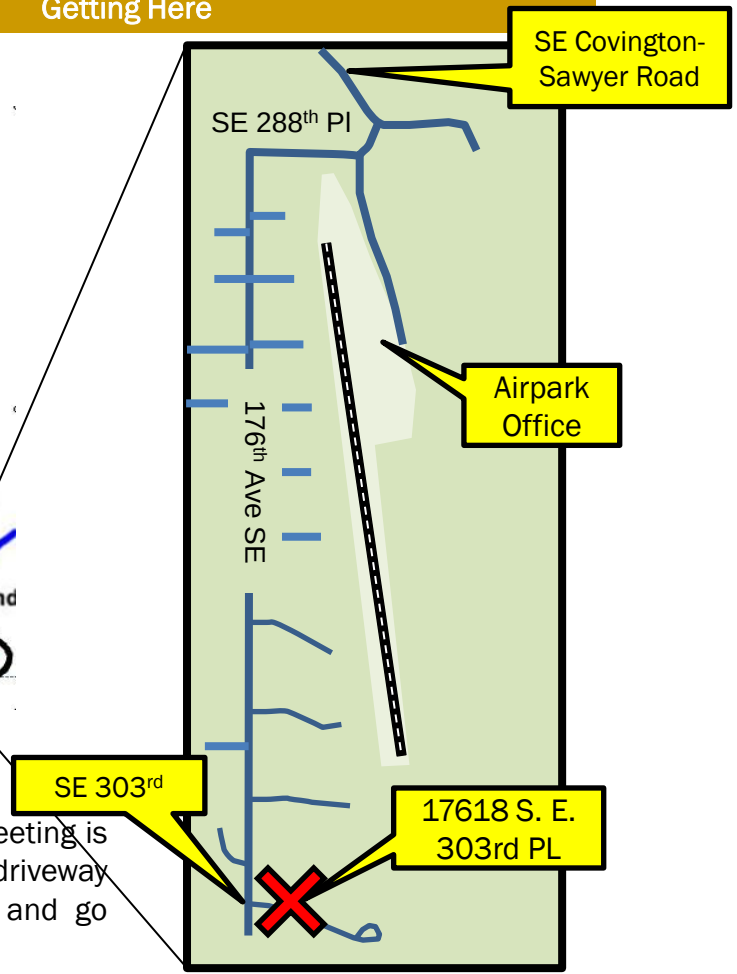
General Discussions

Note: Deadline for Newsletter articles is 6 PM Sunday evening before the meeting.

Meeting Address:
17618 S. E. 303rd PL
Kent 98042

Getting Here





Park along side of road at 303rd, meeting is at the second house. Walk down the driveway between the garage and the house, and go downhill to the hangar

Young Eagles Rally – Saturday, July 12th

Steve Cameron is looking for ground volunteers as well as pilots for our Young Eagles rally that is part of Auburn Airport Day on July 12th. Specifically, we are looking for 4 pilots to give kids ground school before their flights, 4 volunteers to escort people on the ramp and answer family questions, 2 volunteers to marshal aircraft, and 3 people to man the entrances to the airshow area and triage new arrivals.

We have 4 pilots confirmed so far… only 13 more to go for our goal of 17. If you know of anyone you think might be interested, please let them know -- reduced 100LL price for the day, a T-shirt, a Young Eagles baseball cap, a nifty name tag… all in addition to the sheer joy of introducing an eager young person to the exciting world of flight.

If you can support Young Eagles that day, contact Steve at YoungEagles.S50@gmail.com.

Centennials for Fairchild, Travel Air Aircraft to Be Celebrated at AirVenture 2025

Two iconic aircraft types from the golden age of aviation, Fairchild and Travel Air, will celebrate their centennial years during activities at EAA AirVenture Oshkosh 2025, held July 21-27.

The 100th anniversary year for each aircraft will welcome those airplanes to the AirVenture flightline, with additional programs and activities held in conjunction with the Fairchild and Travel Air type clubs. All owners of Fairchild and Travel Air aircraft are invited to be part of the centennial activities.

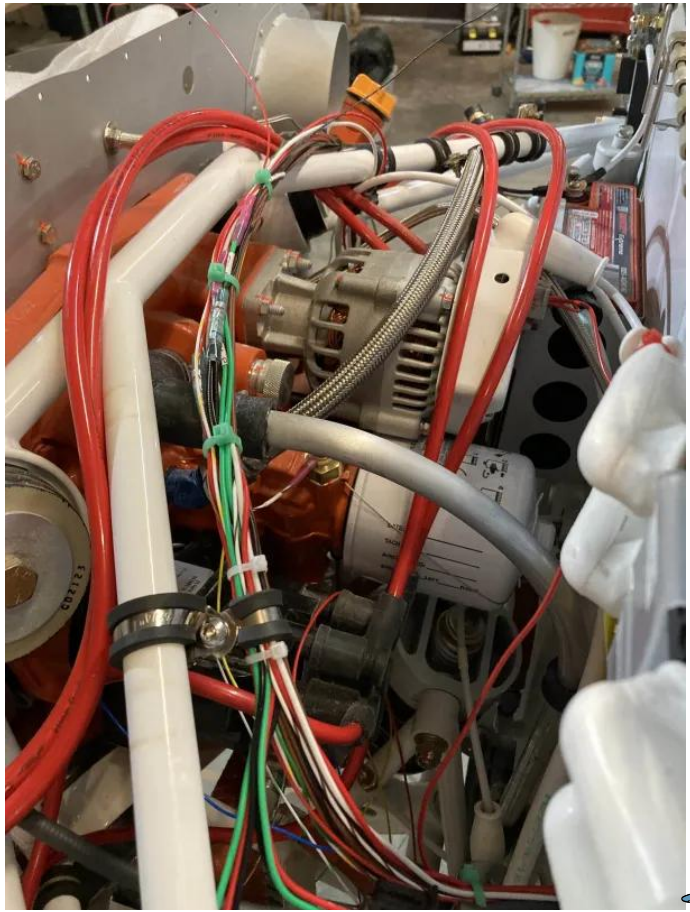
“Each of these aircraft companies were founded in 1925, but took very different paths through their histories,” said Rick Larsen, EAA’s vice president of communities and member programs, who coordinates AirVenture features and attractions. “Each of these aircraft types made unique contributions to the world of flight, especially the momentous era from 1920 until 1940.”

The EAA Aviation Museum currently has the oldest Fairchild aircraft in existence, a 1927 FC-2W model. It is in early American Airlines markings as it served as an early carrier after flying for Interstate Airlines.

The Travel Air Manufacturing Company’s short history was a partnership of three famous names in aviation history: Walter Beech, Clyde Cessna, and Lloyd Stearman of Wichita, Kansas. The three men were part of the Swallow Aircraft Company but in 1925, struck out on their own to create versatile biplanes in a 30-by-30-foot space in downtown Wichita. After some early success, the partnership separated with Stearman and then Cessna moving to their own businesses. The company was eventually absorbed into the Curtiss-Wright Corporation in 1929 and ended production in 1931 during the Great Depression.

Bill admired the "No Step" stencils that Edwina Sharp used on the RV, and asked Edwina to loan them. The stencils themselves were a "one time use" type that Edwina made on the computer, but was happy to make Bill new ones….

Starting to get the spaghetti tangle tamed. This is probably the worst section with a bunch of signal and 5 V splices in it - green zip ties are the high temp "permanent" ones keeping the splices from bouncing around too much, white ones are temp for p-clamp install.... And yes - the twisted p-clamp on the engine mount will be replaced.



From the Chapter 441 Discord Forum

Still on somewhat limited activity courtesy of builder's elbow, but I have gotten the EGT and CHT thermocouples hooked up... only to power up the display and see 2 of 8 reading properly, half showing open circuits, and both #1 and #3 EGTs reading something but clearly not actual temperature. Double checked all the connections and yes, all the physical probes are hooked up correctly to the pre-labeled leads that came with the EMS module already connected to the D-sub connector. I decided to try disconnecting and reconnecting the #4 EGT, and when I disconnected it the #3 EGT came down to 130. I plugged it back in and back up to 1400+. Feels to me that the factory D-sub connector may have been mis-pinned.

Current job is to rig up some test leads to map out the connector... which would have been a much easier job if I had found this prior to install and it would have been a simple bench check.

From the Chapter 441 Discord Forum

DO-IT-YOURSELF EJECTION SEAT*

Young pilots flying fast military aircraft need ejection seats to fling them away quickly if problems occur.

But us old guys flying slow homebuilts sometimes need ejection seats, too. Aging is a slow foe; things feel OK forever, but suddenly you realize it's caught up and you're hollering, "Mayday!"

Take my case. For twenty-five years, I'd been lifting myself vertically out of the open cockpit of my Fly Baby with a combination of arm and leg leverage. But knee problems took one leg out of the mix, and made the first few inches of lift difficult. I had to brace myself on one of the rudder pedals with my good leg, and I didn't like the extra wear-and-tear on a control system.

What I needed was an ejection seat. Not a youngsters' rocket equipped Martin-Baker to fling me over the hangar roof, but a much slower one that would boost me those first critical inches.

What to use, then? I looked at scissor-lift tables, with an eye towards adapting the lift portion to the Fly Baby cockpit. All were too big and too heavy.

Inspiration finally struck: What about those lift chairs for the older folks? Could I adapt the lift mechanism to the airplane?

I stopped by a local medical supply store, hoping to examine some of the mechanisms used by the seats. Instead, the manager showed me the Uplift Technologies Power Seat (now sold as the Carex Upeasy Seat Assist). The Uplift is a single, self-contained package that is designed to be placed atop any type of chair, plugs into a wall outlet, and lifts and lowers the occupant about eight inches. It's designed to be portable, so the weight is low enough to allow a senior citizen to carry it around.

It was a perfect solution, with no need to disassemble and attempt to modify the mechanism.

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* No, this is NOT an April Fool's Joke!

Power Issues

The power cord was a problem, of course. My initial hope was that I could replace the motor with a 12 volt DC unit. Access the motor was easily achieved, but finding a 12 volt unit that would fit the same mounting holes and carried the same gear on its shaft would be problematic.

My fallback was an automotive inverter. Many companies sell units that connect to a car battery and supply wall-plug power to electrical gizmos. Some of these can be purchased for $20 or less.

How big an inverter? The Uplift seat is rated at 120 volts and 0.6 amps, or about 72 watts. Considering inefficiencies of the inverter, a 200 watt inverter seemed the minimum size. Fortunately, it only runs a few seconds per flight.

Research unveiled an issue when using an inverter to operate an appliance with a motor. The cheap inverters produce a square wave, fine with most electronics (which convert it back to DC anyway) but motors can't use it. Units producing a sine wave are a bit less common and more expensive.

I found a 200 Watt inverter with a "Modified Sine Wave" output for about $45. A quick test with a battery showed the power was acceptable to the seat. Because of the power draw, I installed a beeper to remind me to shut off the seat power.

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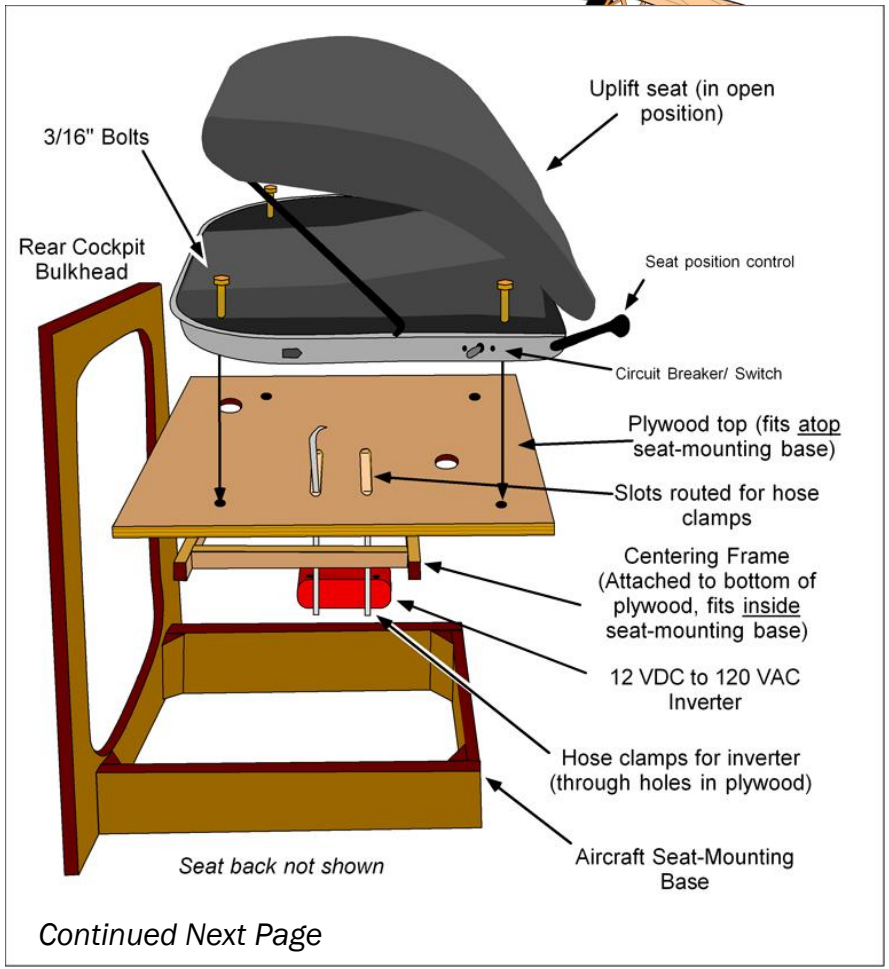
Assembly

The initial plan was to place the Uplift directly atop the existing seat-mounting frame, adding just a few brackets to keep the seat in place. A bit of consideration, and I reluctantly abandoned that approach. The frame would have concentrated the weight into narrow portions of the seat base, and I was concerned the plastic would eventually crack.

Instead, I used a piece of ½" plywood, like the stock seat. A wood frame on the underside of the plywood fit inside the seat-mounting frame to hold the unit in place.

The inverter had a flat mounting surface with small feet. I installed it upside down (e.g., an inverted inverter) below the plywood, held in place by stainless-steel hose clamps (with padding) through holes in the plywood panel. The top of the plywood was shallowly routed out so that the clamps sit flush with the surface. The surfaces were curved and smoothed with chisels and sandpaper to avoid stress points on the hose clamps.

With the seat in the full-rise position, access to the inside of the plastic exterior shell was easy. A Molex connector was installed on the outside of the shell for power, as was a combination switch/circuit breaker. A bit of bench testing showed a ~4 amp draw, so I used a 10 Amp breaker left over from a recent electrical-system rebuild.



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Operation

There was more to it than just the seat base, of course. I laminated some thin plywood for a back, with a piano hinge to allow it to rock forward to get access to the baggage shelf behind the seat. A bit of foam, a bit of upholstery….

The upshot? It works. Turn on the aircraft master switch, verify the avionics master is off, and flip on the seat-power switch and hear the beeper. Pull the seat lever up, and the eight inches of rise makes it easier to clamber out of the cockpit. The photos below show the amount of rise I get. This is also convenient when I put young kids in the cockpit…they aren't sitting at the bottom of a well.

The seat runs a bit slower on the inverter than it does on wall-plug power, something research had mentioned. It takes about 25 seconds for full rise. It's a subtle motion, not really apparent other than my adjusting position in the cockpit as the sides drop away. One friend said, "You looked like you have a bad case of gas."

Anyway, this has made a tremendous difference, and it's been trouble-free for the ~12 years that it's been in place.

This Month

Corben Baby Ace

The Baby Ace, a single-seat, single-engine, parasol wing, fixed-gear light airplane, was marketed as a homebuilt aircraft when its plans were first offered for sale in 1929 — one of the first homebuilt aircraft plans available in the United States. Plans are still available and Baby Aces are still being built. Orland Corben designed a series of aircraft for the Ace Aircraft Manufacturing Company, the Baby Ace, Junior Ace, and Super Ace. Corben's name was associated with the aircraft, and it is commonly known as the Corben Baby Ace.

Ace Aircraft: aceaircraft.com
Wikipedia: Ace Baby Ace - Wikipedia
Pilot Mix marketplace: Corben Baby Ace | Light Aircraft DB & Sales
EAA.org: 1955 Corben/Lambert Baby Ace D - N9017C

Videos:

Flying The Corben Baby Ace
First Flight of the Baby Ace
Corben Baby Ace

Specifications

General characteristics:
Crew: One
Length: 17 ft 8.75 in Wingspan: 26 ft 5 in Height: 6 ft 7.75 in
Wing area: 112.3 sq ft Airfoil: Clark Y (modified)
Empty weight: 575 lb
Max takeoff weight: 950 lb
Fuel capacity: 9.6 gallons

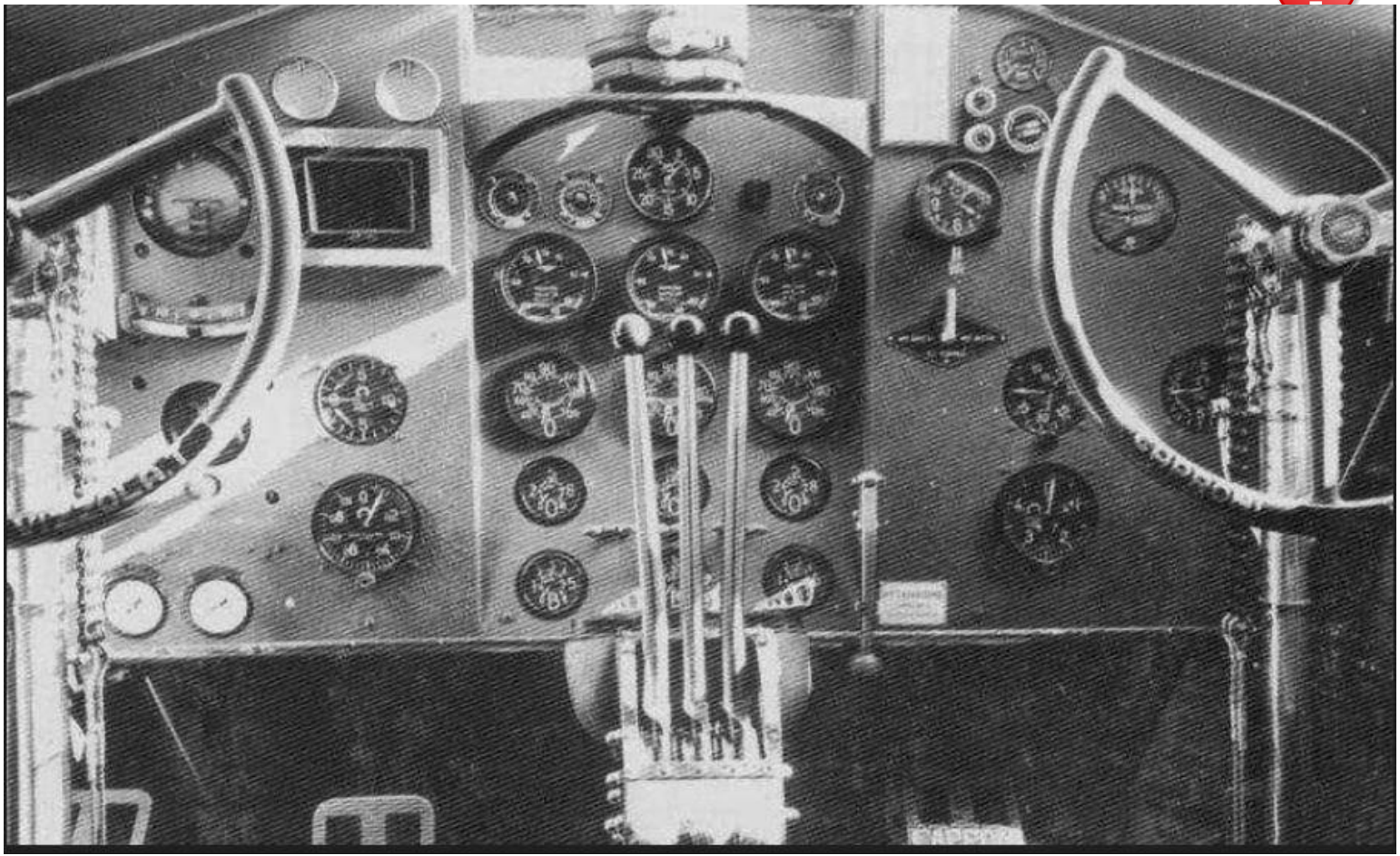
Powerplant:

1 × Continental A65/A80/C85 or Salmson, Szekely, or Anzani equivalents

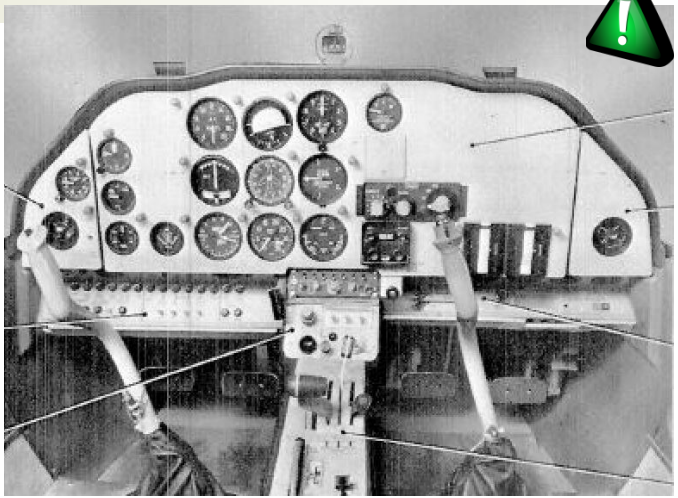
Performance

Maximum speed: 110 mph
Cruise speed: 100 mph
Stall speed: 35 mph
Range: 350 mi
Service ceiling: 16,000 ft

This Month



Scottish Aviation Bulldog



The Scottish Aviation Bulldog T Mk 1 was ordered as the standard primary trainer to supersede the De Havilland Chipmunk; it first entered service in April 1973. In all, the RAF received 132 Bulldogs, which equipped the Central Flying School and other units. The Bulldog was a side-by-side trainer that was developed from the Beagle Pup with a more powerful engine and larger canopy.

General characteristics

Capacity: 2
Length: 23 ft 3 in Wingspan: 33 ft 0 in Height: 7 ft 6 in
Wing area: 129 sq ft
Empty weight: 1,430 lb Max takeoff weight: 2,350 lb
Powerplant: 1 × Lycoming IO-360-A1B3 200 HP

Performance

Maximum speed: 213 mph Max Cruise speed: 150 mph
Stall speed: 62 mph
Range: 540 mi

RAF Museum: Scottish Aviation Bulldog T Mk 1 - RAF Museum
BAE Systems: Scottish Aviation Beagle Bulldog | BAE Systems
Fluzeug info.net: Scottish Aviation Bulldog - Specifications - Technical Data / Description

Firestar – Pennsylvania: The pilot had recently purchased the accident airplane, and had completed numerous taxi runs but found that the airplane was hard to taxi in a straight line. He decided to fly. During the initial climb, the airplane immediately started to drift to the left, and as the airplane continued to climb, the airplane continued to make a left turn. The pilot applied right rudder and aileron and increased the power from 1/2 to 3/4 full but that the airplane continued to the left.

He flew in the local area for about 20 minutes and could not resolve the left turning issue. He attempted to land at his private airstrip, flying two approaches, but the airplane continued turning to the left. During the landing flare on the third approach, the airplane continued to the left and impacted trees.

The pilot reported, "after replaying the accident in my mind, I decided that when I was doing my test taxiing, I might have been introvertly [sic] pressing the left trim button on the control stick. I might have done this several times which resulted in the crash." (7/30/2017)

Zenith CH-701 – Missouri: Although he had no night or instrument flight experience, the sport pilot departed in a non-instrument certificated light sport airplane at night with an overcast ceiling and thunderstorms in the area. Radar data showed that the airplane proceeded on course for about 9 minutes and then entered a right descending turn that continued to ground impact, which was consistent with the pilot attempting to return to the departure airport and not paying attention to his altitude.

Examination of the accident site revealed that the airplane struck open level farm land in a right wing-low, nose-low attitude. Examination of the engine and airframe did not reveal any evidence of preimpact anomalies. The pilot had a history of chronic insomnia treated with temazepam, a sedating benzodiazepine, and was regularly prescribed hydrocodone, an opioid analgesic. Toxicology testing detected these drugs and their metabolites in the pilot's system. The pilot was likely impaired by effects from his use of temazepam, and the impairing effects of temazepam were likely enhanced by the pilot's use of hydrocodone. (7/27/2017)

Lancair Evolution – Arizona: The pilot departed on a cross-country flight in his recently purchased high-performance homebuilt. About 25 minutes after takeoff, the pilot informed an air traffic controller that he was experiencing electrical problems and requested to divert to the airport where his maintenance facility was located. The pilot further stated that his electrical system was not charging and that he expected he may lose radio communications due to the loss of electrical power. The pilot continued about 30 minutes to the diversion airport. About one minute after being cleared for landing, the airplane's transponder stopped sending altitude information, consistent with electrical power being too low to power the radio system. The pilot performed a low pass over the runway, presumably for the tower controller to confirm that the landing gear were extended; although the pilot was not in communication with the controller, the controller transmitted that the gear appeared to be down. The airplane continued on a close-in downwind leg and turned onto the base leg of the traffic pattern; witnesses saw it enter a steep left turn followed by a near-vertical descent consistent with an aerodynamic stall.

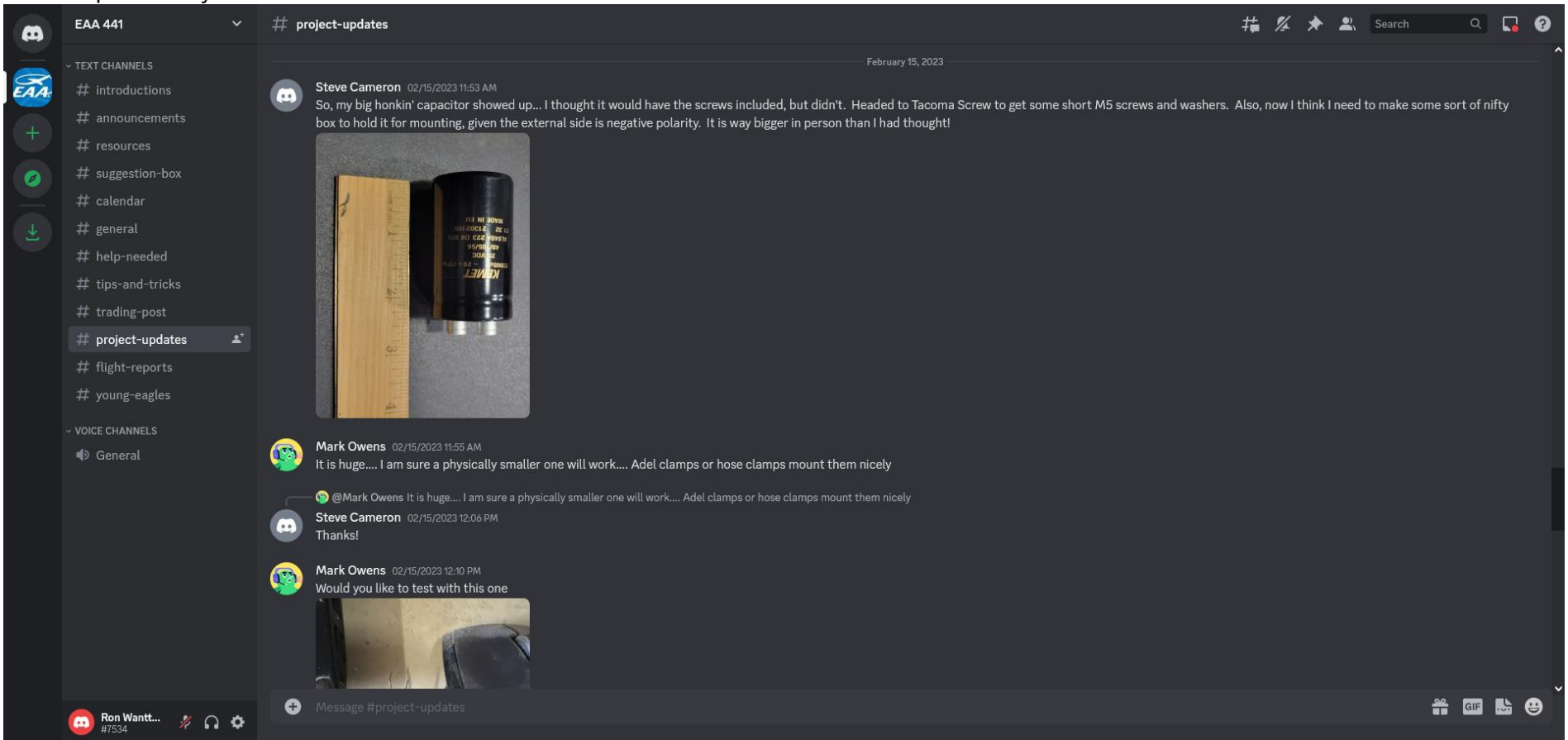
The accident airplane had experienced electrical problems several days before the accident; however, the pilot's handling of that situation suggested a lack of familiarity with the airplane and its emergency procedures. During that event, he allowed the airplane to become slow at low altitude while troubleshooting, and he attempted to activate the emergency landing gear extension system, but instead pulled the parking brake handle. Due to the postcrash fire, the origin of the electrical system failure could not be determined. (7/17/2017)

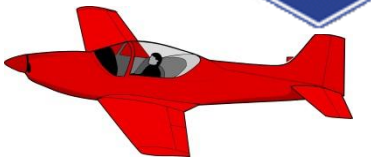
Hi fellow EAA members,

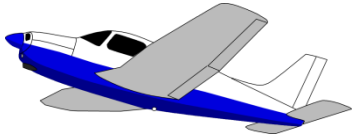
I am currently selling my unfinished S-18 project. No engine. Considerable amount of aluminum sheet and tubing included. $12,000. If you or someone you know who is interested, please contact me at:

Norm Pauk: Tel: 253-561-4801
Email: Npauk@msn.com

EAA 441 has a dedicated online forum using the Discord server. It's a free service without ads or spam content, and can be accessed via mobile apps or on your PC via a web browser. To sign up, email Edwina Sharp: ebsharp@centurylink.net.







Chapter 441 is fortunate to have two tech counselors. Feel free to call Brian (253)-369-0489 , or Dave Nason any time. You don't need to wait for some significant milestone in your project.

Remember, this is not an "inspection". The shop doesn't need to be cleaned for a visit. All are quite used to looking at pieces, parts, and assorted bits, and will be happy to answer questions, offer advice, and generally talk about projects, building, flying, or whatever.