

Volume 8

February 2024



SKYWRITER

Calgary Recreational Flying Club
COPA Flight 114



OFFICIAL NEWSLETTER

Our Mission

Promoting the safe enjoyment of aviation for pilots, aircraft builders and enthusiasts.

Our Vision

Welcoming owners and pilots of all types of aircraft including ultra-light, amateur-built, certified and other types of aircraft.

Connecting members through regular meetings, monthly newsletters, our website, social media, BBQ's and fly-outs.

Exchanging knowledge and information about flying and flight safety, and aircraft construction and maintenance via meeting presentations, newsletters and other events.

Sharing and enjoying real-world flying adventures.

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Featured on the Cover:

I shot this picture of Al Baljak flying his Minimax Ultralight, solo for the second time at Indus.

PRESIDENT'S MESSAGE

FEBRUARY 2024 BRIAN BYL



Are you enjoying the Weather Roller-Coaster ride?

From +14C to -42C to +13C in January. That's a 56C temperature swing. Woo-wee! It's way more fun than any midway ride! Unfortunately this weather pattern can cause some problems.

On January 28, I jumped in the 195 and joined Adrian in his North Star (a Super Cub clone) and we headed out for a flight. Two hours later we returned to CGB2 and I was the first to land in the light crosswind. I thought I nailed the landing but I was in for a big surprise!

As I slowed down to less than 10 mph and the rudder lost effectiveness, the crosswind pushed the tail left.

I applied left rudder and brake however, the tail continued its swing to port. The swing continued and the plane slid into the snow bank along the side of the runway. I was simply an observer as I watched the left wheel sliding sideways kicking up snow, slush and mud as I waited and hoped that the gear wouldn't fold. It all happened in slow motion. There was no contact with the ground and no damage so I taxied back to the hangar and shut down.

It took a while for me to settle down and figure out what happened. I settled on this explanation. While we were out flying, more snow along the east side of the runway had melted and drained across the runway. The ground was still frozen except for the top inch, or so, that the warm weather and sun had softened. With the water not soaking in, there was an extremely greasy layer of mud and water on the runway.

As I slowed down and the tail started to swing, I applied the brakes. However, the right wheel was on the drier portion of the runway.

The right wheel slowed properly on the drier surface while the left wheel started to slide with completely ineffective braking. When that happened the momentum of the tail exacerbated the swing and all I could do was hold on!

Luckily the speed was very low and there was no damage. I was so lucky that all I ended up with was a really dirty airplane that took me over six hours to clean.

Adrian landed right behind me and as soon as he touched his brakes they locked up, too. He managed to keep his plane straight. His aircraft is much lighter and has a much shorter tail so it wasn't affected as much by the crosswind.

Lesson learned: Be very careful with muddy sloppy grass runways!



**Off-runway Excursion
January 28, 2024**

Regarding February's club meeting, we tried to arrange for a guest speaker from the Avro Arrow Museum, however that did not materialize.

Stu will continue with further presentation and discussion on a couple of very useful weather websites that present pilots with weather info in plain, easily read language.

Please remember also, that the current Aviation Weather Website will be decommissioned on February 28th. We can review its replacement site if the members would like to do that.

As a further update I've now got over 11 hours on the new cylinders and the oil level has dropped about one quart. I'm very happy with that.

Don't forget our meeting is **Wednesday, February 14, at 19:00** at the Hangar Flight Museum in the main area of the museum. I know its Valentine's Day so maybe take your Significant Other out for dinner the day before when it's not so busy. And don't forget the bouquet of roses. Maybe that will make amends!

See you Wednesday!

Brian



Photo by Stu Simpson

Newsletter Update

Director/Newsletter Editor *GREG LABINE*



**Please lift with caution,
this is a heavy issue!**

This issue is a big one, filled with some tremendous contributions and many great pictures. The biggest newsletter for the smallest month of the year, makes sense right? The membership really came through. It will take most of February to read it all.

Just as well, since we cant keep up with the ever changing weather and the thaw/freeze cycles. So, might as well catch up on our club news and stories.

This month we have loaded up for you a great story from long time club member Ed D'antoni retracing his path in aviation through the years, starting with RC aircraft and leading up to his current ownership in two different aircraft.

We re-join Dennis Fox and friends, as they fly into Day 2 of the Great Air-berta Rally. This day even better than the first day, covering many miles and several airports.

We also catch up with Stu and Tina Simpson on the next part of their journey down south, complete with adventure, discovery and the obligatory mechanical gremlins that often turn up. More on that in the story.

President Brian Byl delivers a great article by Mike Busch on aircraft maintenance and a phenomenon called the "Waddington effect". He also shares some more good tool finds for the home shop or hangar.

Directly below I've written an editorial related to the Transport Canada NPA involving the **proposed Ultralight regulation changes** and what it could mean for many of us. Please take a moment to read, I feel this is a very important issue.

**See you next Time,
GREG.**

Editorial: Proposed changes to Ultralight regulations.

Transport Canada has proposed regulation changes that may affect many of you. The proposal is **NPA 2024-001**. These changes have not been publicized very well and organizations representing pilot's interests such as UPAC, HPAC and COPA appear to not have been involved or notified properly about the proposed regulation changes.

A short window for pilots to respond to Transport Canada to express comments, concerns or objections was given and the deadline of February 07, 2024, has passed. We tried to get the word out to the membership, and I hope many of you responded to Transport Canada on the matter.

Firstly, in discussing this, I'll try to be constructive and professional and keep politics out. However, there's no way to sugar coat it. This is not a positive thing for Ultralight pilots, and I fail to see how this enhances safety in any way. I'm missing any positives if there are any.

The regulation change, which is most concerning, is the redefinition of an "Ultralight" to determine which pilots are permitted to operate them, based on how the aircraft are registered.

In a nutshell, any pilot who has an Ultralight Pilot Permit has, in the past, been able to fly any airplane that meets the Ultralight specifications of 1200 lbs. gross weight and stall speed of 45 mph or less, regardless of which category the airplane was registered in. Many aircraft models in Canada can be registered as Basic Ultralight, Advanced Ultralight or Amateur-built, despite being the same aircraft.

This means that suddenly, many aircraft that an Ultralight Pilot could previously fly, would now be prohibited based on nothing more than a paperwork difference between identical aircraft!

Under the new definition, a pilot could only fly airplanes registered as C-I** marks and would no longer be permitted to fly any registered as C-F** or C-G**. If this happens, it means some pilots would no longer be able to fly aircraft they are currently flying or building, based solely on which "box is ticked" on the registration.

The proposal is somewhat nebulous, as it doesn't clearly define some important details and the devil is always in the details. It's far too vague a proposal, being close to implementation. Unfortunately, many have tried to reach out to transport to be met with "we are experiencing higher than normal call volumes, blah blah blah...".

More accountability regarding the rationale for this proposal is required, as it seems unnecessary and unreasonable. Many questions and concerns exist such as:

*Why is the change necessary?

*What is the purpose or intent of this regulation change?

*Why haven't organizations who are advocates for us Canadian pilots, such as UPAC and COPA, been more informed and involved in this proposal?

*What will happen to those who are suddenly faced with this change drastically altering their current flying?

*How does a paperwork difference between identical aircraft change a pilot's ability to safely fly it based solely on how it is registered?

The history and evolution of ultralights over the last four plus decades has exhibited an increase in quality and safety over the years. The early generations of ultralights were primitive, being foot-launched, weight shift hang gliders with glorified chain saw motors. In Canada, our earlier ultralights were predicated on "Launch weight" initially. Later, we went by maximum gross weight. First 1058 lbs., then eventually 1200 lbs. (Bula) and 1232 lbs. (AULA). Most changes led to an improvement in safety, comfort, efficiency & performance. Each change made them more like "Real Airplanes" as some would say. Now this seems to be a reversal of this trend. We are going backwards, and we are trying to make ultralights differ more from other category aircraft rather than harmonize with them. It makes no sense. It's totally counter intuitive.

Our Canadian ultralight regulations have been safer and more realistic than the American FAA part 103, with 254 lbs. max empty weight. However, the LSA regulations in the states opens them up to a broader variety of aircraft. By contrast, this proposal to now restrict Canadian Ultralight Pilots to C-1** ultralights greatly reduces the number and types permitted.

Amateur-built aircraft projects are a multi-year, long game commitment. It's hardly fair to change the rules after a builder has already committed significant time and resources into an aircraft, he won't be able to fly. There doesn't appear to be any information indicating their intention to "grandfather" projects in progress.

There is some talk about a possible workaround, allowing you to re-register amateur-built aircraft to a C-I ultralight registration but, would that be irreversible later by a subsequent owner? This will affect the resale value.

Also, consider if you are currently a PPL but are planning to simplify things and drop down to an ultralight permit later, this now is something which could affect you at some point in the future.

Anytime they take away rights or privileges from any segment of aviation it affects all of us. Your flying privileges may or may not be directly impacted by this change but, as a Pilot, it should matter to every one of you. This time it's Ultralight Pilots and Ultralight Aircraft, next time it could be RPP, PPL pilots or Amateur-built aircraft, etc.

They are trying to fix that which isn't broken. I'm perplexed as to why. I don't understand why they feel it necessary to propose these changes now. This brings to mind two very funny quotes from Ronald Reagan:

"The Government's view could be summed up in a few short words. If it moves, tax it. If it keeps moving, regulate it."

"The most terrifying words in the English language are, I'm from the government and I'm here to help."

Albeit funny, there is some grain of truth in there. I'm a believer in freedom and less red tape in my life, something I find appealing in ultralights, but now our "freedom to fly" is being questioned, encroached upon, and potentially jeopardized. As Kathy Lubitz from UPAC puts it, with the stroke of a pen, privileges are lost and we won't get them back.

Frankly, if an Ultralight pilot can safely operate an aircraft of 1200 lbs. gross weight and 45 mph stall speed, HE CAN SAFELY OPERATE AN AIRCRAFT OF 1200 LBS GROSS WEIGHT AND 45 MPH STALL SPEED- PERIOD!

The aircraft doesn't know how it's registered, and the rules of aerodynamics don't change due to insignificant paperwork differences or what letter follows the C- on the side of the aircraft.

Most laws are written with a view to "what would a reasonable person do?" There are always those who, when faced with what they feel is unjust or unreasonable, will act despite it and defy that law. Unfortunately, this broad prohibition may foster an environment of contempt in some, rather than the atmosphere of safety and encourage compliance. We shouldn't condone that behavior but could understand the motivation for it.

Sadly, the ultralight category is shrinking anyways, due to a deficit of freshly minted Ultralight Pilots in the last 10-15 years. The entry level of Ultralight flying is Training schools, and those are disappearing which cuts off the supply chain of new ultralight pilots. Combined with many of us probably retiring from flying in the next 15 years and the average age of ultralight pilots being in the 40's, the last generation is likely already trained, permitted, and flying.

I feel they should leave the category as is for now and eventually it may naturally go extinct. Why bother drafting new regulations for a category that's fading?

Many feel that more time and consultation is required and that perhaps this proposed change be abandoned outright. At the very least, they should communicate this more effectively with everyone involved or affected, asexual members of the Canadian aviation community. It is my hope that they back away from this proposal and allow the status quo to prevail. We'll wait and see.

For more context the video in this link will elaborate on the matter.

Take a moment to watch:

<https://www.youtube.com/watch?v=Sn5FskMRpwg>



How did I end up owning a Cessna 172?

By Ed D'antoni

Our Model Aircraft flying field was next to the Winter's Indus Air Park (CFY4). In the late 80's, the airport, and Blue Yonder flying school owner Wayne Winters was providing ultralight training in a Merlin aircraft.

In the Calgary Herald there was a daily ad showing a picture of the Merlin with the caption "This is an Ultralight." This ad and seeing the Merlin continuously doing circuits got the best of me and I decided to go for an introductory flight. With hours of Microsoft Flight Simulator under my belt, flying was pretty straight forward.



Most people, hearing the word "Ultralight", will imagine a flying lawn chair. Only in the USA is an Ultralight a flying lawn chair. Throughout the rest of the world, they are modern aircraft capable of carrying an all up weight of 1300 lbs. That is enough for two, 200 lb pilots, baggage and enough fuel for 500+ mile trips.

These aircraft are reliable and safe, but also expensive. A new factory-built aircraft will cost somewhere between 75 and 200 thousand dollars. In the USA, any aircraft under 254 pounds (115 kg) empty weight (excluding floats and safety devices), with a maximum fuel capacity of 5 U.S. gallons (19 L) and unable to exceed 55 mph (88 kph) can be considered an ultralight. It can be flown without any type of aircraft licence or permit.

In Canada, you must have at least an Ultralight Pilot Permit to fly this same aircraft. A Canadian pilot with only an ultralight permit is not allowed to carry a passenger or fly into controlled airspace.

The Merlin, that Wayne Winters used for training, was a rugged high wing aircraft powered Rotax 912 UL (80 HP) engine. Wayne introduced hundreds of pilots to flying, and trained them in this aircraft.

Within a few days of this introductory flight, Wayne sold Blue Yonder to Bev Befus. In addition to Wayne's Merlin, Bev owned a second "White" Merlin that was used for training and rentals.

After early morning model flying, I often dropped in to visit. On one occasion Bev was busily trying to replace a bent axle on the white Merlin.

He had a rental and lesson scheduled within a few minutes. I ended up doing the repair while Bev took a student for a lesson in the other Merlin. Over time I was doing a lot of small maintenance and repairs. I took a few flights with Bev when there were no rentals or lessons happening. Somewhere along the way an AME (Aircraft Maintenance Engineer), Ted Orlick, started showing up at the field.

One day, a cop that brokered aircraft, showed up trying to sell a 1960 Cessna 172 to Bev for \$10,000. Ted took a quick check of the aircraft and we all ended up sitting around a table somewhere on the airport.

A small unpainted section of the right wing indicated it had been repaired in the past. Ted told the cop (I considered him something like a "car curber" doing the same with aircraft) that it had significant previous damage that had to be redone. The Curber said "how about \$6500." Ted kicked me under the table and I blurted out "OK."



Ed and his 1960 Cessna 172

I didn't have any type of aircraft permit or licence, and had never even been in a small aircraft! So here I was, the owner of a Cessna 172. The aircraft came with logs complete back to its original sale in 1960. Review of the logs showed the damage was from a strong wind while the aircraft was tied down outdoors. The repair had been done by Cessna in Wichita. Ted was not happy with the repair so I had it checked and a few pieces added at a local aircraft repair centre.

Cessna 172's and 150's are often used as training aircraft. The 150 is a 100 hp two seater whose use at our 3500 ft altitude is a marginal performer. The four seat 172 performs much better at our altitude.

Another hangout at Indus was a Certified Flying Instructor (CFI) whose name I forget, so we'll call him "John". He offered instruction for \$20.00 per hour in my aircraft. I had to pay \$500 up front. In the meantime, I signed up for a weekend crash ground school at the Calgary Flight Training Centre. The good thing was once I paid for the course, I could take it as often as I wanted for no extra charge.

John and I flew the Cessna out of Indus. I'd meet at his home, do the flight briefing and then we'd go to Indus and fly for an hour, do a review and head home. John trained "by the book." He was not able to understand what the problem was if things weren't turning out as he wanted. An example was circuits at Airdrie. He taught circuits as: *climb to 500 ft AGL (Above Ground Level), turn left and climb another 500 ft to 1000 ft AGL. Turn downwind, at midfield, announce Downwind at 4500 ft, announce turning base and final and land.*

At Airdrie circuit height is 900 ft AGL. Because of the shortened circuit downwind I never had enough time to announce downwind at midfield. John was getting irritated and told me that I had one more chance to do it correctly or we were cutting the lesson short. We cut it short. I later figured that all I had to do was do a longer climb out before turning crosswind. Next time we went out I did the circuit according to John's liking, then asked him what I was previously doing wrong. He had no idea so I took him back to Indus.

I soloed after 7 hours of instruction. I let John have the \$360.00 credit, flew alone to Springbank, parked at the Calgary Flying Club and asked about instruction. I obtained my Private Pilot Licence (PPL) under the direction of two excellent instructors, Paul and Paula.

Shortly after that, Wilf Stark purchased a Rans S-12 kit that he planned on assembling and renting to Bev Befus at Blue Yonder Aviation. Wilf was a great starter but lousy finisher of many things.



Rans S-12

I purchased a fifty percent interest. Barry Halliwell, Don Ward, a 3500 hr Hercules pilot, and SAIT aircraft engineering instructor, and myself assembled the aircraft in a rented heated warehouse in SW Calgary. We had it flying within six months of starting construction. Most of the assemble was done by Don and me. We were both very good at misplacing tools.

We worked on Sundays and Wednesday evenings. We usually stopped work on Wednesdays when we ran out of tools. Wilf never did help with the assembly but he always showed up sometime between Wednesday and Saturday, cleaned up our mess and put our tools back where they belonged.

I enjoyed flying the Rans S-12 much more than the Cessna, so after a few years I sold it. When I purchased the 172, because of liability issues, no manufacturers were building or selling light aircraft. In 1994, the US passed legislation putting an 18 year limit on manufacturers liability for Light Aircraft. When Cessna again started producing 172's the price was in the \$100,000 range. This resulted in the public immediately realizing the value of used aircraft and used prices more than tripled!



**Evektor SportStar
at Indus. (Left)**

Rans S-6 (Below)

It was with pure luck, not good planning, that I obtained my PPL, Instructors Permit, a share of a Rans S-6 and still had money left over. I now own and fly an Evektor SportStar and a Rans S-6.



Ed D'Antoni

THE (SOON TO BE) GREAT



AIR-BERTA AIR RALLY

PART TWO - BY DENNIS FOX

Day 2 of the Airberta Air Rally is starting out great again, clear skies and light winds, that's two days in a row, somewhat rare in Alberta.

The first destination airport is Coronation-CYST and I am wheels up at 8:30 for a 9am ETA and 71 miles. I soon hear chatter from Mel and Allan who are on their way from the Hat. We all arrive on time and Mel tells a few tall tales from his youth about growing up here.

We depart at 9:20 for the short hop north to Killam-Sedgewick/Flagstaff Region. Touch down at 9:40 and it's time to check out Shelley's home baking, which is always in good supply in the Terminal Building. The Iron Creek Club here is very active with STOL competition, Aerobatic events and (I'm told) even the occasional appearance by the Snowbirds for a practice session overhead. Shelley's baking lives up to its reputation as always.

Were off to Vermillion- CYVG at 10:50 for a 48 mile leg to the north east. The town is along the north side of Highway 16, the "Yellowhead" and the airport is northeast of the town. It's close, easily within walking distance, but we've got places to go, so not this time.

Next destination is Bonnyville-CYBF. Were off at 11:36 for the 57 mile flight following a track of 350. We're heading into Alberta's "Lakeland" country and it's very green with lots of bush, trees and small lakes. The Cold Lake Military base is farther to the northeast where the F18's turn our tax \$\$ into noise. We touch down just after noon and are greeted by a local aviator who offers us a vehicle to go into town for lunch. We declined the hospitality as we brought our own bag lunch.

It's a beautiful day to sit in the sun and view the lineup of planes tied down. We speculate on the first one, it kind of looks like a Super Cub, but not quite. A few names are thrown out, but none of the suggestions are said with conviction, so we eventually have to walk over to see what it really is. Husky, I think, if my memory is correct. Lunch is over and we've got avgas to burn.

We're at our most northerly point of today's trip so we point south west for 100 miles to Cooking Lake-CEZ3. Cooking Lake has been the location for much of the history of Canada's early aviation. It was the main float plane base for all the bush flying going north from Edmonton. Pick any book about bush flying and it will be mentioned. The bulk of activity now is landbased of course so we're headed to the airport.

It's busy today with planes in the circuit so probably some training going on. We fit into the flow and land without any trouble. Fuel is a good price so we line up and each take our turn at the self-serve pump. We take the time to check out the terminal building which is dated and deserted. There are some interesting pictures which reveal some early history of the airport and float base.

The next hop is a short 30 miles south to Wetaskiwin-CEX3 and we're there in about 20 minutes. We choose to stay under Edmonton-YEG class C to get into EX3 but they don't sound very busy and might even be glad to have somebody to talk to.

At EX3 we are welcomed by a young lady who is the Airport Manager. She is very enthusiastic about the Air Rally and showing off her airport.

Across the airport to the southwest is the Reynolds-Alberta Museum and the Canadian Aviation Hall of Fame. It's been a few years since I've been there but it's a first class show. In the years "BC" (before Covid) they had a resident barnstormer offering rides in a vintage biplane right outside the Hall of Fame.

There is lots of homebuilding and restoration activity here. In 2019, I was here to view the unveiling to the public of a freshly restored Hawker Hurricane. That same day the Reynolds Museum brought their own Hurricane across the airport and lined it up beside the guest of honor, a good two for one deal. The restored Hurricane was later transported on a flat deck semi down Highway 2 to Calgary's Hanger Museum (wings on), to the amazement of a lot of drivers.

From Wetaskiwin we track 226 degrees for 35 miles to the Town of Rimbey and the greenest and smoothest grass runway the RV has touched its wheels on. As I taxi in I recognize the green RV9 of Claude from Red Deer. I have seen his name in some of the airport registries we have been at so I know he is on the Rally also. We are welcomed by the airport owner Wayne and his wife. Mel recognizes them right away from a Century Flight event a few years back so they have some catching up to do.

After nearly an hour of trading stories we have to get on the move as Mel and Allan are still 200 miles from home. As we lift off Rimbey we head straight east for 22 miles to Lacombe-CEG3, our last stop of the Rally for today. This takes us over Gull Lake which looks inviting with lots of people enjoying a day at the beach. If only I had a floatplane...

That's a wrap for today and it's time to head for homebase(s). We confer about tomorrow and we decide to go each on our own. We will probably meet up somewhere along the way as we have several of the same airports to hit. Today has been a good day as I've covered 460 miles and landed at 8 airports. Tomorrow will be the longest day as we're heading into the north country.

Stay tuned...



September Southbound

Part - 2

By Stu Simpson

Day 3

I hoped this would be a pretty easy day. We only had two legs to get to Memphis. We'd scoot through Missouri and stop at an airport called Vichy Rolla. Bob and Carl and I stopped there on our return flight from Washington and Nashville in 2014.

We taxied out behind another Airbus A319 and did our run up as the jet thundered off ahead of us. As soon as we were airborne a few minutes later I called the tower.

"Des Moines tower, Bravo Quebec Romeo. Can we get a right turn to get offline of the jet?"

"Bravo Quebec Romeo turn right to 070, climb and maintain two thousand five hundred."

There was likely no wake turbulence danger, but I didn't want to take the chance, especially fully loaded and with precious cargo.

We were soon cleared out of the zone and on course. I asked Tina what she thought of the whole experience at Des Moines, which was the largest and busiest airport we'd flown into together. She was impressed that we could mix with jets and other traffic so easily and she complimented me on how well I managed it all, too. I spent the rest of the morning glowing from her compliment. The smoke was back, cutting our visibility to about four miles.

However, once we crossed into Missouri things cleared steadily, bumping the visibility up to 10 or 15 miles.

This was more like it.



This is the American Airbus A319 we followed out of Des Moines. By Tina Simpson

There was more cloud cover, too, which morphed into a complete overcast. The forecast showed little inclination for rain along our route, but there were some build-ups forecast for later in the day. ADS-B weather showed storms to the west of our route, but they were moving slowly and wouldn't impact us.

One thing that got my attention was the temperature dewpoint spread, being 17 and 13, respectively. Of course we were higher and cooler, and thus in a narrower spread range. I kept a close eye on the carb temperature gauge. At one point, I thought I felt the engine miss just ever so slightly. I didn't hear it, I felt it. Well... I think I did. I pulled on the carb heat and left it on until we landed at Rolla.

Gassed up and going again, the landscape changed quickly from tree-bordered farmland to much more heavily wooded hills. I decided to climb another 2000 feet for some extra time and radio range should the unthinkable occur.



There were some spots where we could have set down if needed, but not a lot of them. Then for about 15 minutes or so, we were above the most heavily wooded area of what's known as the Mark Twain National Forest. There were no roads or open fields there and Tina and I both remarked later that we were nervous being over that region. We put Missouri behind us and coasted across the very northeastern tip of Arkansas where the land spread into broad fertile river bed farmland.

A radar image from ADS-B showing light precipitation along our route over Missouri. The round symbol toward the bottom of the photo is another aircraft. By Stu Simpson

The sky cleared, the sun shone, and the Mississippi River wandered lazily beneath us. Slow moving barges, shoved along by trundling tugboats, ambled up and down the river. Surprisingly large sand bars tempted me to land on them. Pure folly, I know, but I was still tempted.

How lucky I am, I thought, to be here in the middle of this adventure, especially when I get to share it with Tina.



As we hit Memphis' Mode C veil I called approach control and received regular instructions through the north and east side of their airspace. Approach handed us over to Olive Branch tower. Olive Branch is a small city just across the Tennessee state line in Mississippi. Tower vectored us onto a left downwind for OLV's runway 36 with another request to keep it tight and fast. It was no problem for me and the Cav.

After landing, Olive Branch Aviation directed me to the general aviation parking ramp where we unloaded and tied the Cav down in the afternoon heat. I looked around to check if there was anyone nearby or anyone who could see us. There wasn't, so hiding behind the Cav's fuselage and tail, I quickly slipped out of my pants and into a pair of shorts. Tina laughed at me at first, but within a couple of minutes, she did the same thing. It was only then we realized that while no one at ground level could see us, the tower guys would've had a completely unfettered view of the whole thing. We laughed our asses off over that for the rest of the trip.

Days 4 & 5



We spent the weekend in Memphis and saw what we came for. We went to Graceland, the Civil Rights Museum, ate terrific southern barbeque, and toured Beale Street. By Sunday evening, I was itching to get back in the air again.

Visiting Graceland. It's pretty cool that we flew here in our own plane. By Stu Simpson

Day 6

After returning the car, and getting a ride back to OLV, we loaded and fueled the Cav. We'd decided on St. Louis as our next destination, a 230 NM flight to the north. We would use Creve Coeur airport, a satellite field at the west end of the city, and only 7 NM from St. Louis International.

Olive Branch was busy with training traffic on such a nice sunny morning, and runway 36 was active in the light northeasterly breeze. We taxied out and got cleared for the straight-out departure. At the edge of the OLV's zone I switched frequencies.

"Memphis departure, Canadian experimental Golf Bravo Quebec Romeo, two thousand off Olive Branch, runway heading."

"Experimental Golf Bravo Quebec Romeo, where are you headed today?"

"Northbound to St. Louis, sir."

"Roger, maintain present heading and altitude."

"Maintain present heading and altitude, Bravo Quebec Romeo."

Happy to be back in the air, we watched the city go by and noted just how spread out it really is.

Approach bid us goodbye at the edge of the veil and I thanked him for their help. We were over the Mississippi again, and its adjacent riverbed farmland. We soon passed back into Missouri and the sky steadily filled with mid-level cloud. It was almost a carbon copy of our leg through the area a few days prior. We found a bit of rain this time, but hardly enough to even wet the windshield.

The landscape below wasn't as comfortable to traverse as I'd like. It was largely wooded, but with enough open spots to use should we need one. I know my concern for forced landing spots is a byproduct of all my years flying two-stroke ultralights. My caution and subsequent anxiety aren't bad things, but sometimes I wish I could shake them.

ADS-B radar told a colorful story of showers and growing thunderstorms north of St. Louis. Good thing we weren't planning to challenge the sky in that direction. St. Louis approach guided us into the downwind for Creve Coeur and cleared me to change



Some interesting patterns in the sand as we cross the Mississippi back into Missouri. By Stu Simpson

frequencies. An RV-12 pilot announced himself doing circuits for the grass runway immediately beside the paved one. I made my calls and dropped into the right-hand downwind for runway 16, turning final north of the Missouri River. Final approach paralleled a pair of enormous girder bridges which were actually a little distracting.

Tina approved my landing and we rolled in to the fuel pumps. A fellow who identified himself as Jim greeted us. He was very friendly and thrilled to see the Cavalier. A FedEx pilot by profession, he once owned a Cavalier project. He eventually sold it, but stated he actually saw my airplane in Regina shortly before I bought it back in 2012.

Soon another guy showed up who was just as friendly as Jim, and who had an Emeraude project in his hangar. It was wonderful chatting with them about wooden homebuilts as I fueled and secured the Cav. Tina was busy arranging ground transport for us.

Once the Cav was tied down and covered up, we were on our way to the car rental place.

Day 7

We enjoyed the day in St. Louis, seeing the famous Gateway Arch and taking a paddle boat trip on the Mississippi River. One thing I can tell you about that city is that it makes Calgary's roads seem like a billiard table.

Day 8

Today's goal was to reach Minneapolis, MN, another big city on the Mississippi. I very much like Minneapolis, having flown there in the Cav on a couple of adventures alongside with Bob and Carl in Kirkby's Cherokee. I was looking forward to showing the place to Tina.

We left Creve Coeur departing southbound and making a sharp right turn northbound as soon as we had enough height. I was careful to stay well below the Class Bravo floors around KSTL as we scooted north. We planned our first stop at Cedar Falls, IA.

We were over southern Illinois when I noticed the voltmeter on the Dynon EFIS acting strangely. The voltage occasionally jumped up and down from 13.8 to 14.5. Then it settled down to its normal 14.1 or 14.2. I kept a close eye on it but the variations seemed to be getting worse.

We were about 35 minutes into the flight, about five miles east of Quincy, IL, when I decided the errant voltage needed attention. I turned hard left, started the descent, and switched to Quincy's frequency.

I assured Tina there was no danger, and we just needed to make a precautionary landing to figure out why the voltage was jumping around. I wasn't worried about our safety, but I was concerned there might be a problem with the alternator. It's a difficult one to find and replacing it could mean a lot of hassle and delay. And of all my airplane maintenance knowledge, electricity is my weakest area.

We set down easily on Quincy's runway 31 and rolled out past a couple of well worn MiG-29 fighters on the ramp. The FBO's ramp attendant actually brought a rolled up carpet over and set it out for Tina when she exited the plane.

Now that we were down safely, and Tina was standing comfortably on her ramp carpet, I could start worrying in earnest.

I knew we'd be peeling at least the lower cowling off the Cav so I checked with the ramp guys that doing so there would be okay. They said it would be fine. Then we headed into the FBO's briefing room and I called Gary Abel and Gerry MacDonald. Both of them advised me to check the wiring connections and the tautness of the alternator belt. I hadn't considered the belt as the problem, but it made a lot of sense the more I thought about it.

I pulled our luggage from the cargo bay, retrieved the tool bag, and we set about unfastening the lower cowl. I'm proud that Tina wasn't the least bit shy about pulling fasteners and getting her hands dirty.

I noted a few things once I started digging around in the engine bay. First, there appeared to be more oil splatter than there should be. Had the front crank seal sprung a leak again? It could also be oil from the crank case breather tube getting up there during the turbulence we encountered. That's happened before. It wasn't something that needed immediate attention, but would certainly bear further monitoring. (Later I learned the leak was from loose crank case seam bolts, which were duly tightened.)

The alternator connections had some oil on them, which I cleaned thoroughly. Then I checked the belt and found it was definitely looser than it should be. I also found a lot of alternator belt "dust". That's normal as the belt wears over its lifetime, but this was more than average. It was another symptom of a too-loose belt slipping on the pulleys.

We tightened up the alternator belt and locked it down. Then I started the engine and watched the voltage. It appeared to be normal, running steady at 14.3 volts. We were back in business and I wouldn't have to search for an obscure 1970s British-made alternator in Quincy, Illinois.

We re-attached the lower cowl and loaded up the plane when I stopped to do a mental inventory of everything we'd done. Then I realized I forgot to re-tighten the alternator hinge bolt. **Aaaargh!**



Frustrated, I apologized to Tina and we used another half hour to remove the cowling again, tighten the bolt and put the cowling back in place. Then we loaded the plane, got some gas, and used the bathroom. Now we were ready to file and fly.

Story will continue next month...stay tuned.

**Stu awkwardly checking for faults beneath the Cav's panel at Quincy, IL.
By Tina Simpson**

Waddington Effect

“More maintenance is necessarily better”

I recently came across an article by Mike Busch that was in EAA’s March 2011 issue of Sport Aviation.

In this article Mike talks about reliability-centred maintenance (RCM) and how maintenance programs were developed for high levels of safety and performance. He points out that RCM is performed in all segments of aviation except the lower end community of General Aviation (think Cessna, Pipers, etc) versus the corporate business sector of GA.

Research done in the 1960’s showed that the premise of time related “useful life” reliability was wrong. The RCM thought process included new thinking that included the following points:

- **Most failures were not age-related but were either infant mortality or maintenance induced**
- **Changing efforts to manage failures**
- **Change from fixed-interval and time-directed to on-condition maintenance**
- **Removing the most TBO’s and life limits to condition monitoring**
- **Recognize that most components, systems failures have acceptable consequences and run-until-it-breaks is acceptable**

This shift in maintenance thinking resulted in massive reductions in maintenance costs and downtime with an unexpected dramatic reduction in in component failures and downtime.

While this appeared to ground breaking research at the time (1960’s) it was actually a British scientist, **Conrad Waddington**, who, during the Second World War investigated the maintenance and breakdowns of the RAF bombers.

When his Operational Research (OP) team reviewed the data on scheduled and unscheduled maintenance they found some very surprising results: Unscheduled repairs increased sharply after each scheduled maintenance event (50 hours) then declined steadily until the next scheduled maintenance event when they spiked again after the maintenance.

The OP Team conclusion was that scheduled maintenance tended to increase breakdowns by “disturbing a relatively satisfactory state of affairs” and there was no sign that the breakdown rate was increasing after the mandatory scheduled maintenance interval had been exceeded. In fact the observations demonstrated that scheduled maintenance was actually doing more harm than good. It was dubbed the “Waddington Effect” in a paper written by Prof. James Ignizio in 2010.

Revisions to the RAF maintenance program included:

- **Increase time between scheduled maintenance events**
- **Eliminated maintenance tasks that were not deemed beneficial**
- **Improved maintenance personnel scheduling**
- **Create better maintenance guidance and documentation**

The recommendations and subsequent revisions to the maintenance program resulted in a 60% increase in bomber fleet flying hours – a very substantial improvement.

So how does this translate into our GA fleet? Well, we now can run our engines beyond the recommended TBO period and operate “on-condition” until the performance, etc dictates action is required. Most of our engines will give us indications as to their general health and performance but we have be familiar with their normal performance parameters.

Simple maintenance such as checking spark plugs, compression, oil consumption, etc are all part of the engine health monitoring program. A friend of mine who flies turbine aircraft told me that a turbine will generally give no indication of failure until it does whereas a piston engine will almost always “*talk to you*” before failure – if you are listening!

It’s also a common saying that the first five hours or so after a scheduled maintenance event are the most dangerous and have the most failures. That’s not just a saying – there are quite a number of incidents right after scheduled maintenance. These can be as simple as forgetting to put oil in, controls hooked up wrong, lack of safety wiring, etc.

Maybe sometimes it’s better to fly until its breaks! Just make sure that you and your aircraft safety is not compromised by any potential failure.

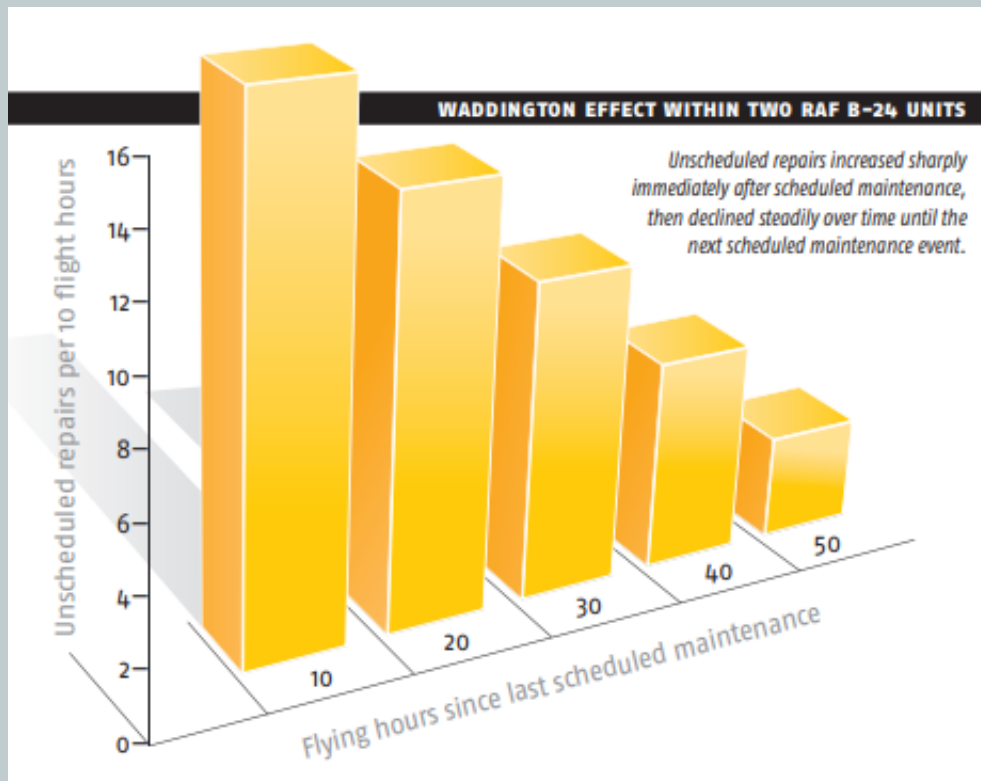
Here's the link to the Mike Busch article:

https://resources.savvyaviation.com/wp-content/uploads/articles_eaa/EAA_2011-03_the-waddington-effect.pdf

Enjoy the read!



British biologist Conrad Hal (C.H.) Waddington performed groundbreaking research on aircraft maintenance during World War II



Mike Busch Profile:

Mike Busch, EAA 740170, was the 2008 National Aviation Maintenance Technician of the Year and has been a pilot for 44 years, logging more than 7,000 hours. He's a certified flight instructor and an A&P-IA. E-mail him at mike.busch@savvyaviator.com. Mike also hosts free maintenance webinars on the first Wednesday of each month at 8 p.m. (Central). To sign up or access the archives, visit www.SavvyMX.com/webinar

A product I’m quite happy with are the Ernst Wrench Organizer trays.

I’ve have bought a number in various sizes to organize my tool chest at home and the hangar. My wrenches are easy to find and I can take each tray to the airplane. They also have socket and other organizers. (See my photos below.)

They are available at numerous locations in the city and on-line at KMS Tools and Amazon and probably other locations. Amazon’s prices were pretty good.

Another thing I did to make my hangar tool cabinet easier to open was colour code my keys with the cabinet locks. No fumbling trying to find the right key.

Links:

Ernst Manufacturing:

<https://www.ernstmfg.com/Tool-Organizers.aspx>

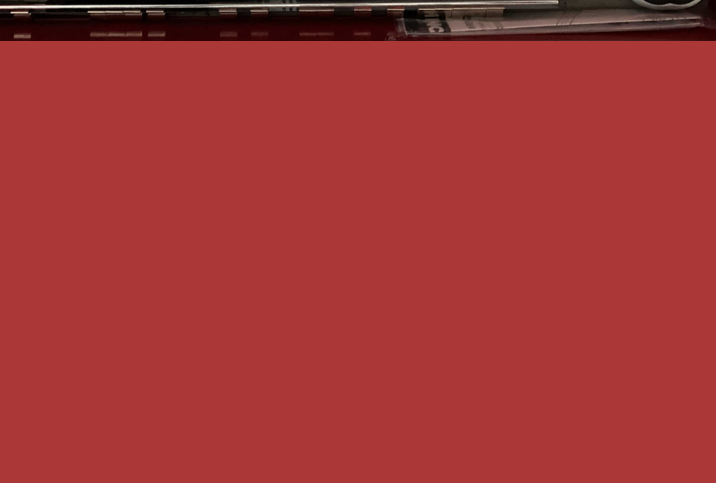
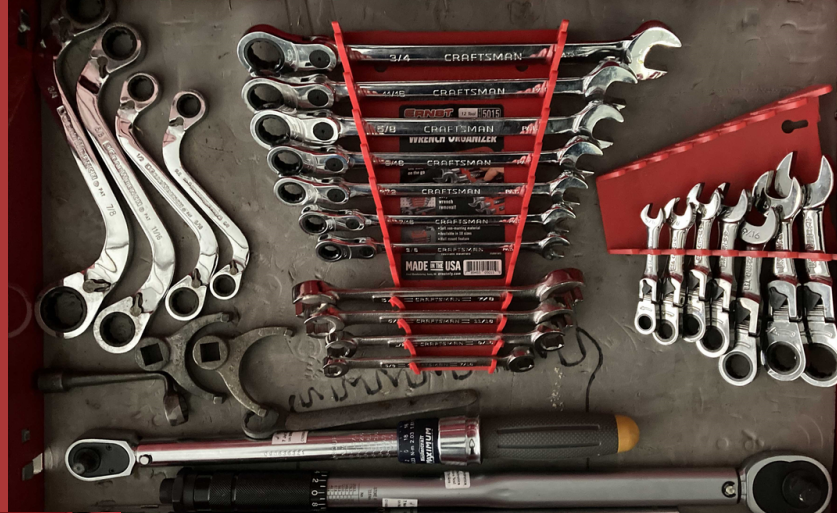
KMS Tools:

<https://www.kmstools.com/>

Again just to be clear, I don’t own shares in any of the mentioned companies!!

Tool - Trays







Calendar of coming Aviation events

March 2 & 3, Saturday & Sunday – Aircraft Fabric Covering Workshop. This is a fantastic workshop for anybody who wants to recover their aircraft, do small fabric repairs or may be considering a future fabric aircraft project.

About 12 years ago, I participated in an EAA Sportair Fabric Workshop, in High River, taught by Gary Hillman. I found him to give a fantastic presentation and to be a great teacher. I definitely recommend Gary and this workshop to everyone.

If you are planning on attending, register a spot early as it fills quickly closer to the date. See poster below for more details.



DON'T EXPERIMENT WITH FABRIC COVERING!

AIRCRAFT FABRIC COVERING WORKSHOP
Saturday & Sunday - March 2 & 3, 2024
Red Deer Airport - Hillman Air Hangar

An introductory hands-on workshop that prepares you to cover aircraft through learning the theoretical and practical components of fabric covering.

Registration fee **MUST** be paid in advance to confirm registration

TO REGISTER: CONTACT GARY HILLMAN
\$450.00 403.886.4187
gary@hillmanair.com

-  Approved fabric application techniques per aircraft type certificate & STC
-  Proper use of equipment, techniques and safe practices
-  Correct coating applications
-  Instruction by fabric covering experts & factory certified instructors:
Gary Hillman & Jodi Smith



If you have any future events, please feel free to forward the details to me so I may share them here with the members. crufcnews@gmail.com

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