



International Cessna 120/140 Association

Issue 414 Spring 2020 Feb/Mar/April



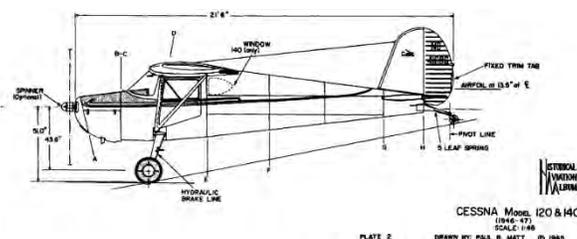
Andreas Ritter, Buenos Aires (page 4) Photo by Lorraine Morris

In this issue

Tech-Talk by Tye Hammerle

Restoration of Prototype 140A
(Uno part 4)

Jack Hooker





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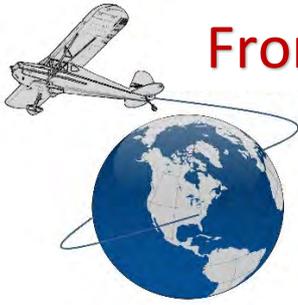
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From our Members... My 140 Story

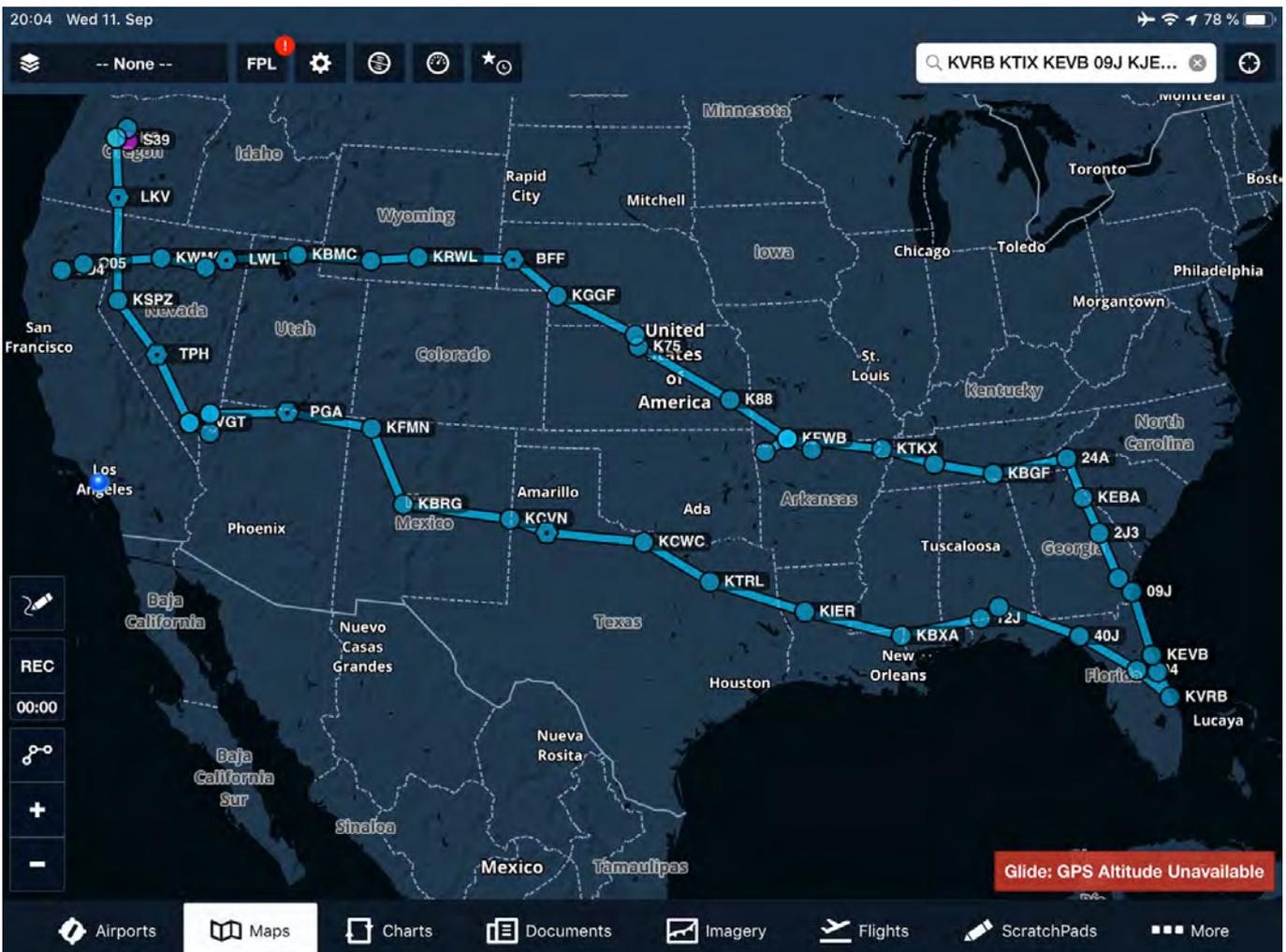
Andreas Ritter, Buenos Aires, October 2019



Andreas and his daughter Anna



Close formation with Ken and Lorraine Morris during the 2019 Branson convention



Andreas flight path after his purchase of N5581M, planning a stop at the 2019 Branson convention.

My 140 story began with Anke. Anke is a colleague of mine, a talented engineer and owner of a beautiful 1947 Bonanza. We dreamed of one day owning a Beech 18 and fly and maintain it together. For me, the world of General Aviation and especially vintage aviation, was new. Flying Airbuses for Lufthansa for 25 years, I had no idea, of what I was getting into. Anke took me to vintage air shows in Germany and we started to talk with Beech 18 owners. „*It is a good idea to do your first few hundred tailwheel landings in a smaller aircraft*“, one of them said. Anke and I discussed this idea and decided to look for a 120 or 140. They seemed to be affordable tailwheel trainers.

Anke helped me to find my 140. In September 2017, we started to study barnstormers and trade-a-plane and a few weeks later, Anke and I flew from Germany to LAX, looked at a first 140 in San Diego, but this one wasn't meant for us. We drove to Las Vegas and there I fall in love with N5581M. Anke did the pre-buy inspection and I flew it, together with the owner. „*How many hours of tailwheel you have?*“, he asked, when we taxied out. „*Zero*“, I answered. I am still very grateful for Anke, who helped with the pre-buy and all the paperwork involved in buying an aircraft.

There I was: 48 years old, A350 Captain, father of 4 kids and – aircraft owner! I thought I could use my European ATPL and jump right in and fly, but I learned that I need (among other things) a US PPL and a tailwheel endorsement to fly this lovely N-registered plane. The next day, I went to a flight school, did some duals in a 172 and wrote the FAA's PPL theory test 3 days later. But there was a lot of bureaucracy. It didn't matter that for the last 20 years I have been flying heavy Airbuses into the USA, the TSA had required me to go through the same, cumbersome, bureaucratic back ground checks, they require from every foreign national who wants to learn to fly in the USA, after 9/11. As some of the training I did 28 years ago in the Lufthansa Flight School in Phoenix, Arizona wasn't well documented in my old log book, I had to repeat it, e.g. the night cross countries. To cut things short, 9 months after I purchased the 140, a DPE gave me my US PPL.

Jon, the 140's previous owner, suggested to get the tailwheel lessons from Brian Lansburgh. Jon flew my 140 to Brian's home airport in Sisters, Oregon, while I had to wait for my next vacation, to go there. Like many of us, job and family keep us busy.

August 23rd, 2018, 10 months after I purchased the 140, was the first time I landed it. Brian showed me how to fly my little taildragger and it was very different from flying Airbuses or even from what most CFIs train in the 172s and Cirrusses nowadays (which is often meant to prepare student pilots for flying airliners, e.g. flying long stabilized final approaches). Brian writes a lot about his way of flying and teaching. If you are interested in it, you'll find it on <https://www.tailwheelersjournal.com/>.

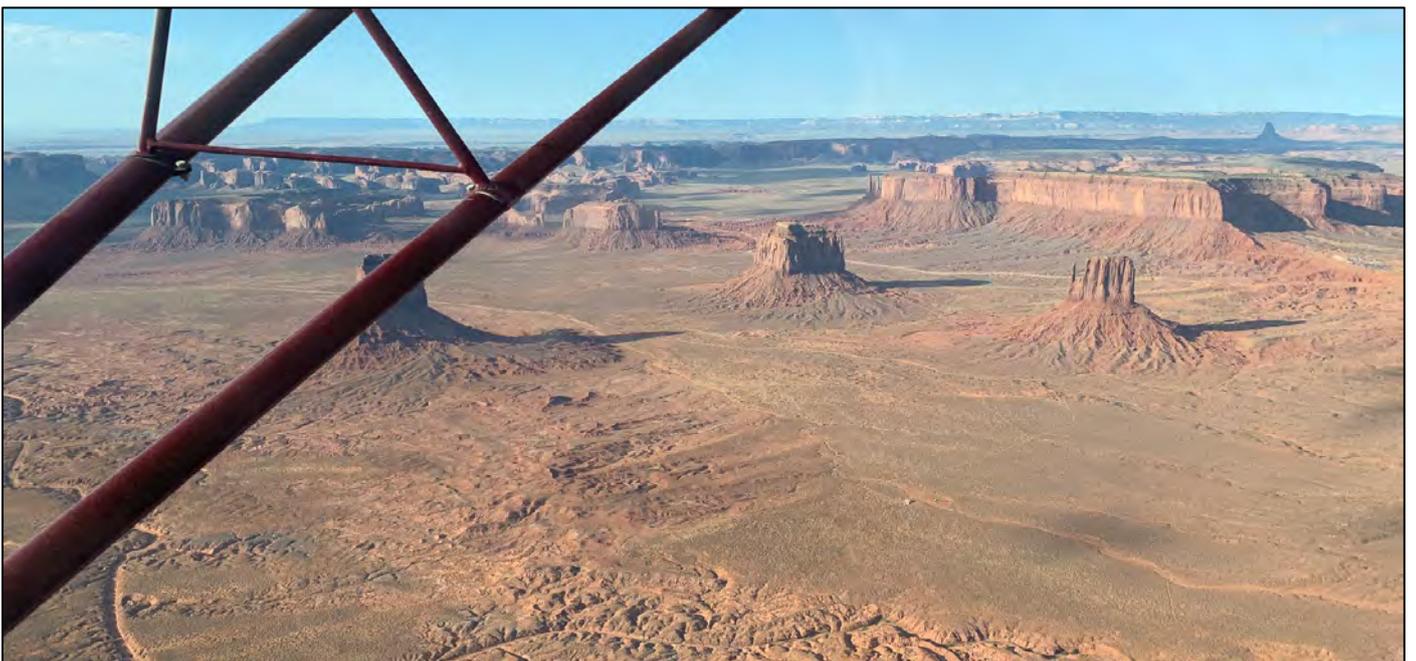
A few weeks after he endorsed my logbook, I returned to Sisters with my 15-year old daughter Anna and we flew the 140 from Oregon back to Nevada. Still unfamiliar with aircraft and environment, we took it easy and flew only a few hours per day. The 140 had its issues, but all the people we met where helpful. In the morning it was cold in the high desert and they helped with pre-heating the engine, charging the battery and even with hand-propping. Everybody seems to like a polished vintage taildragger.

My original plan was to fly the 140 for a year in the USA and then remove the wings, place it in a container and ship it to Germany. But one year after I purchased it, I hadn't flown it much. I had A&Ps repairing the flaps, upgrading the avionics, fixing the voltage regulator and alternator and replace parts of the torn interior. I'd love to do more myself, but I didn't have the knowledge, the tools, the certificate and the time. My wife and I discussed the dilemma and we decided to take a Sabbatical, a full year of unpaid vacation, to have more time together and for our hobbies. My manager supported this and I am grateful to him for doing so. July 1st, 2019, my wife and our youngest daughter Anna moved to Buenos Aires, Argentina. We want to live here for a year, and I plan to spend a part of this time to learn more about maintaining little aircraft and actually fly it. After looking at a small airport outside Buenos Aires, I thought it would be nice to have the 140 down here in Argentina and use it to explore South America, while we are here.

Why should I ship it to Germany, if I live down here? It would be around 90 flight hours, a long trip. And America south of the USA is not particularly made for little single engine piston aircraft. Getting charts, weather info, fuel, FBO support, lodging, maintenance, ATC – all more difficult than in the USA, I believe. I decided that I need more experience, before I can start such an adventure. I decided, I fly across the USA first, to see how this works out and if I like it.

July 13th, 2019, I arrived at North Las Vegas. My 140 was not flown since last October. But the battery was new, the alternator repaired, and the aircraft had a fresh annual. The plan was to meet my family in Florida in a week. I decided to fly alone (without Anna), because I was uncertain about the 140's performance when crossing the Rockies and wanted to stay as light as possible. Geary, owner of another 140 in North Las Vegas, helped me with some tips and brake fluid and then I was on my way.

Leaving Las Vegas, I decided to fly north of the Grand Canyon, roughly along the border between Arizona and Utah. The landscape is breathtaking:



After a few hours of flying eastbound, in Farmington Four Corners, a ramp agent pointed out that there is oil on the tail wheel. I was too inexperienced to notice it myself. But I did note, that the engine oil level was dangerously low. I had a massive oil leak. But luckily a mechanic at Bode Aviation fixed it within a few hours. The leak was caused by a defective seal of the just overhauled generator.

Crossing the mountains in the summer means take-off before sunrise. Farmington has an elevation of 5500 ft and in the afternoons in July, the density altitude is often above 10.000 ft – way too much for our little plane. I always flew with full tanks (and never more than 2 hours), because at that time I didn't trust the fuel indicators, didn't use calibrated drip sticks and had little experience about fuel consumption. I tried to use only runways longer than the density altitude and as a rule-of-thumb, this worked well. After decades of calculating take of performance of airliners accurately (in the 1990s still with paper charts and since 2001 with the EFB), guessing obstacle clearances was suspicious for me. I used what we call the 5P-methodology: "Propper planning prevents poor performance". I always considered all available information, not only the official one like runway length, slope, preferred take-off direction, AWOS, etc, but also sources like Google Earth and other pilot's comments found e.g. in Foreflight. Experience slowly grows with every take off. Luckily, there was never a performance critical take off and luckily, my engine's RPM never dropped below what it is expected to deliver.

Clouds and visibility are typically not a big issue in the Southwest. In fact, I didn't see many clouds until east of the Mississippi. Thunderstorms and turbulence weren't issue as well; mainly, because I only flew in the morning.



In western Texas, crosswinds became an issue. As mentioned in Thomas Horne's book, "Flying in America's weather", the winds pick up, once you come down from the New Mexico high desert. I have landed airliners up to 35 knots cross wind, but the outlook of having to land my 140 in a 10 knot crosswind initially scared me, because even calm wind landings at first needed all of my little tailwheel landing skills (and often the major part of the runway widths). More than once I waited a few hours or called it a day, because I considered the winds being too strong for me.

I am not afraid of flying to larger airports, but I learned that it is better to avoid them. Fuel stops are quicker and tiedown fees lower at small airports. I never called the FBO in advance, because I never knew in the morning, where I would end-up for the night. After having crossed the mountains, my main consideration when selecting airports for overnight stops was the distance I would have to walk from the airport to the next motel. I am impressed by the courtesy car system, and used it more than once, but I never relied on it. All my overnight gear fits into a small backpack and most of the time I had to walk less than 30 minutes.

I spent all of my nights in towns I have never been before and never heard of. As my Cessna was based in Las Vegas for nearly two years, I knew this unique city quite well. Due to my airline layovers I have been multiple times in most of the 10 largest US cities and during my initial pilot training at the Lufthansa flight school in Phoenix, I know Arizona quite well. Now I saw a lot of very rural places and met many friendly folks. Since Texas, I flew also in the afternoon.

In Alabama, I made my first contacts with thunderstorms. Thanks to my Stratus, I saw all the storms on my EFB. I tried to keep a respectful distance but found out that this is not that easy and once I landed just minutes before a storm reached the airport. Friendly folks offered to place my 140 into a hangar during the storm. I offered to pay for this, but they didn't take any money. Great folks.

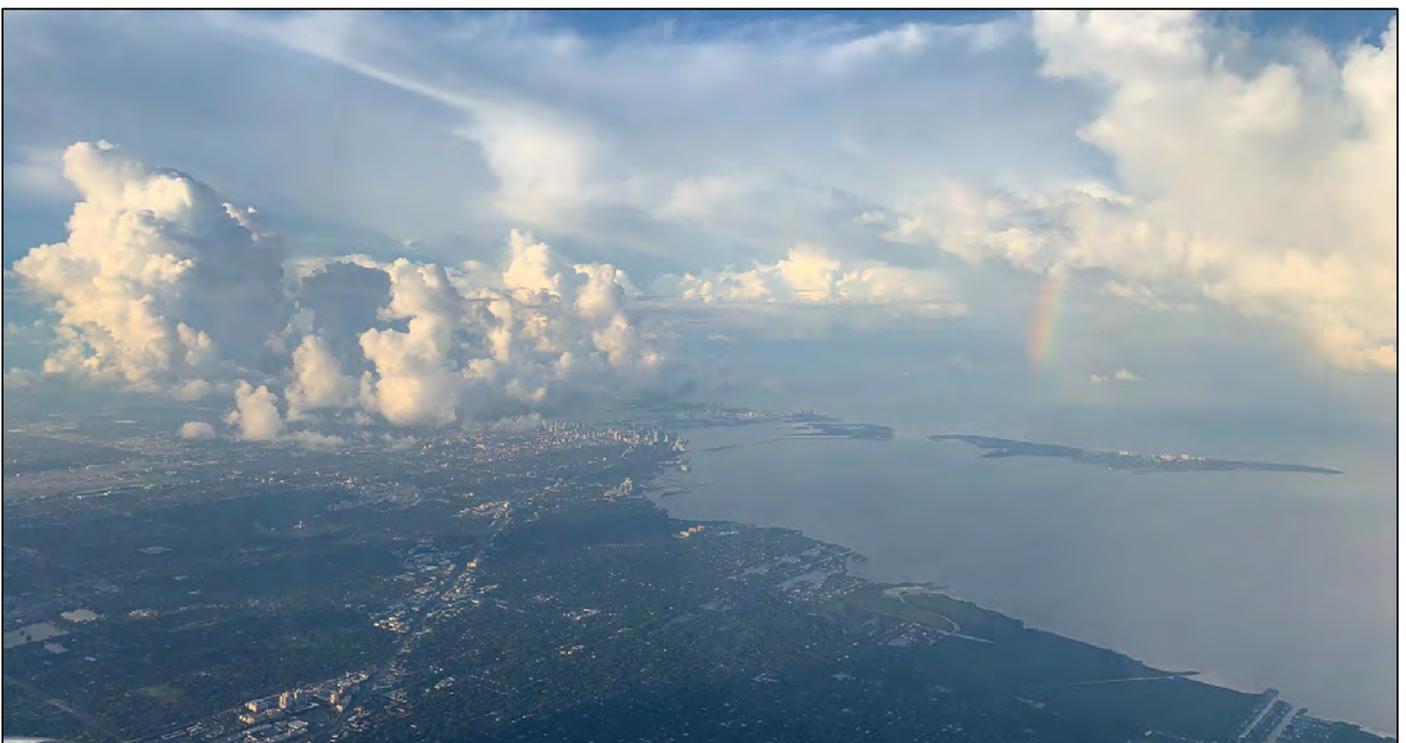


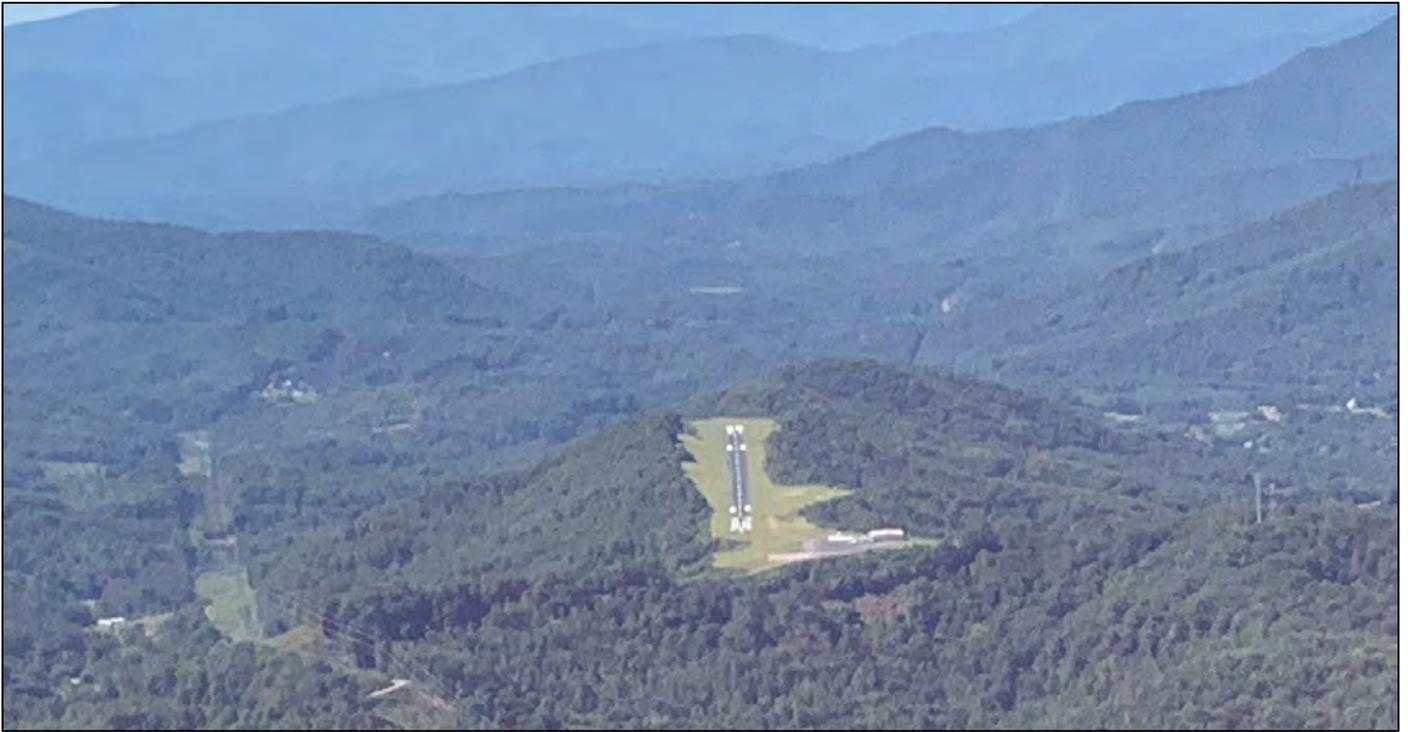


July 21st 2018, I reached my family in Florida and we went to the Kennedy Space Center, spending the day celebrating together with millions of Americans, the 50th anniversary of the Apollo 11 moon landing. After a few days at the beaches, we flew to Buenos Aires, while my 140 was parked in a hangar at Vero Beach.

5 weeks later, I came back. Even in the (unfortunately non-climatized) hangar, the 140 had picked up some corrosion in the hot and humid air of Florida's east coast. The dry climate of the Southwest has its benefits.

I flew northbound along the coastline, annoyed by the dense traffic, complex airspace structure and many clouds. Clouds can grow and rise much quicker than a 140 can climb and while I always outrun the clouds, I often had to change my course and occasionally even my destination, to stay VMC. Did I already say that experience is important? I envy those, who have a lot of it. Flying alone, I couldn't tap into the experience of others. All my years as an airline captain don't help me much to decide what that weather ahead means for me. And I missed the possibility to discuss the facts, options, risks and decisions with my co-pilot. I believe that the much higher accident rate of general aviation when compared to air transport, is mainly, because lonely decisions are often bad decisions. How to avoid them?





I brought my camping gear and flew into places like Jekyll Islands, where I put up my tent not far from the airport. I hiked a day on the Appalachian Trail in North Carolina and spent some time in the beautiful Smokey National Park and the Cheyenne Indian reservation. But I had an appointment further west, so I flew to the West Branson airport in Missouri and parked my 140 next to 3 others.



Within a few hours more 120s and 140s arrived, most of their pilots knew what to expect. The annual convention of the Cessna 120/140 association was new to me. They placed a “First timer” sticker below my name tag and I met two other first timers and many, many very friendly folks. I was a member of the association since I purchased the plane 2 years ago, but this was my first person-to-person contact with association members. I was overwhelmed by the warmth, openness and willingness to join this community.

If you are a member but have never been to the convention: Don’t wait any longer, try to go 2020. They are not a closed group who stew in their own juice, they welcome first timers. You’ll have a lot of fun!



Way too early the 5 days were over, and we all flew away in different directions. I was among the last to leave, heading northwest. My plan was to cross the Rocky’s further north this time. The MSAs in Colorado are all above 10.000 ft, so I planned to cross in southern Wyoming. IFR = I Follow Roads is a good advice for any single engine airplane flying over sparsely populated areas, but roads (and especially railroad tracks) also don’t climb too steep and use the lowest passes available – just what we 120/140 pilots need.

But first I had to cross Kansas, the endless, flat, fertile plain. Suddenly, I noticed that I flew just across the label “United States of America” Foreflight placed on the sectional. Foreflight labels are usually placed right in the center, which means I crossed exactly the spot, Foreflight believes to be the center of the USA. Well, it didn’t look any special to me. Later that day I landed at K82 (Smith Center) and there, at the Center Motel, I learned that US Geologists placed the official center of the USA (lower 48) just a few miles east, close to the village of Lebanon.



The next morning, as usual, I prepared to take off early, before sun rise. I remember that I watched the magnificent starry sky during the pre-flight. Of course, I knew from my flight planning that some of the airports in the vicinity reported dense fog, but others didn't, so I expected thin fog patches below my route, with plenty of airports with VMC in-between.

The take-off, still in darkness, was normal. There aren't any artificial lights around K82. So, when my ancient landing light suddenly showed me the fog bank ahead, which I entered just after becoming airborne, I was taken by surprise. Turn around, was my first thought, because I knew that there was VMC behind me, the fog bank hasn't covered the full airport yet, but turns close to the ground in IMC at an unfamiliar airport can be hazardous. Besides, most of the NOTAMS these days seem to be about erected obstacles. Are *you* checking all these coordinates? After a few seconds, I climbed out of the fog and reviewed what I just went through: Inadvertent flight into IMC! Has it really happened to me? How can I avoid it next time? What could I do better, if it happens again?



I crossed Nebraska and the north-eastern corner of Colorado to Scottsbluff, the last airport with a descent elevation (3967 ft). Fully fuelled, I slowly gained altitude: 6500, 7500, 8500, 9500, average rate of climb, 100 ft per minute. My flight plan would clear all terrain when flying at 7500 ft. Flying at 9500 ft would give me a 2000 ft margin, which was my goal. The weather was excellent and the only thing which bothered me was the strong headwind. Most of the time, my ground speed was less than 50 miles per hour and even the trucks on I80 overtook me.

In Rawlins I stayed for the night. With an elevation of 6817 ft, I decided to take off early next morning. I was already comfortably settled in my hotel, when a huge thunderstorm approached the city and the airport of Rawlins and the heavy winds and torrential rains associated with it began. This time, I didn't have any hangar. Would the tie-downs proof sufficient? I jumped into the courtesy car and drove back to the airport. "*Your little plane dances in the wind.*", said the friendly guy at FBO. Ropes and knots withstood the wind. But just after the storm had passed the airport, the lights at the airport went out. Total electrical power loss. Airport and city of Rawlins were without electricity. The manager at McDonalds sent all his people home and all shops closed.

The high elevation take-offs at Rawlins and RKS (Southwest Wyoming, 6765 ft) the next morning were uneventful. Yes, it takes forever until our little 120/140 gains speed on these runways, but they are loooooong and typically on little plateaus with few obstacles behind, so it is no problem. RKS has a 10,000 ft runway.

My next stop was in Brigham, Utah, just north of Salt Lake City. The pattern was full of student pilots and it took me some time until I found my gap in the pattern and landed. Since Missouri I wanted to change my engine oil, but never found a bucket and a friendly guy who said it would be ok to leave my old oil. Here at Brigham, I was welcomed by four old gentlemen who loved to help me with my old plane, probably because of old memories of the 50s and 60s, when they learned to fly in these birds. They showed me how to safety wire the oil filter – I had never before done this myself. As usual, they wanted nothing for their help. What a wonderful aviation community we have.



I crossed the great salt lake and flew via Wells to Elko, Nevada (EKO). There is a lot of mining activity in the area and Elko is their community center and the place where miners gamble on their days off. For my taste, the town and the airport were already too big. When I departed the next morning, there was even a Bombardier regional jet taking off ahead of me. As usual, they commented “nice airplane”. Didn’t I say that everybody loves our little taildraggers?

Many would say that flying over Nevada is boring, but I find it exiting. At times, the barren landscape is virginal, pristine. It is interesting to see the few signs of human activity and guess what they could be. A closed mine from the 19th century? Last year’s ATV tracks? An old well? A pilot of a single engine aircraft should always know where he/she would land if the engine quits. Dependent of where you fly, the relevant factors differ. Obviously, the most important thing is to bring it safely to the ground. But should you land at the road with some traffic (and the danger of hitting a car) or better on those dust tracks far from any potential help?



Weather was again no factor, but a TFR due to a planned rocket launch made me change my course. It was exactly the time of the planned launch and I looked intensely and tried to see something, but I didn't see any rocket launch. It was different 20 years ago. I flew an A300 back then and we had just taken off in Almaty, Kazakhstan, when the Russian controller told us that the airspace ahead of us is now closed and we have to circle at our position. My Captain and I didn't speak any Russian and the controller's English wasn't good enough to tell us the reason, so we waited, anxiously calculating our diminishing fuel reserves, when suddenly a new bright star appeared in the east. A Sojus rocket had just launched at Baikonur, 400 miles to the east. We saw the first stage separate and fall down to the ground and the second stage continue to orbit. A magnificent view!

North of Pyramid Lake, I reached California. I overflew my planned stop in Susanville and struggled to stay VMC, as the clouds got lower and lower and the terrain higher and higher. I landed at Rogers, waiting for better weather and to study the charts of the last mountains I would have to cross on this trip. I wouldn't say that flying an airliner IFR is easier than flying a single engine piston VFR, but it is certainly very, very different. Analysing VFR weather is a skill, which constantly needs to be practiced and improved. I stared at the clouds and calculated where they started to obscure the mountains. I looked at the charts and asked myself: Can I fly through this valley? Will I stay below? Then, the clouds went away, and I had clear skies until reaching my destination Corning (004) in the central California valley.

I parked my 140 in the hangar I rented there, cleaned it after its long flight, said hello to the friendly folks of Rainbow Aviation and jumped into a taxi which drove me to Sacramento from where I flew to LAX and further to Buenos Aires. I feel confident with the 140 now. It is a good plane. A plane I trust, a plane I learned to know. I am looking forward of flying it again. Maybe to Argentina, we will see...





Photo courtesy of John Kliewer

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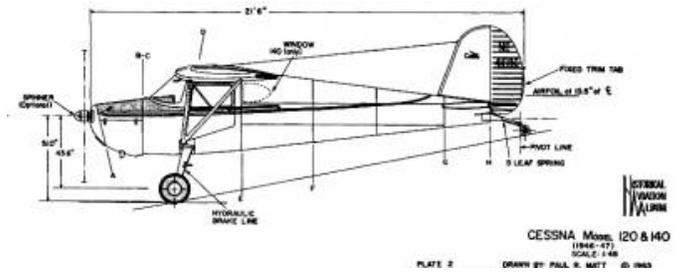


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Tech Talk ...by Tye Hammerle



Saga of the Blinking Alt Out Light

I'd recently installed a freshly overhauled O200 in my 1948 140 and put it on a diet with a new B & C push button starter and Plane Power alternator, pretty close to 10 pounds saved. All the initial test runs and first 35 hours or so have been great.

Everything is running good, oil pressure and temps, volts and amps all right where they should be. Oil analysis is good, however I noticed that my alternator out light would flash with slightly varying frequency sometimes. It had done this since I installed it and at first, I regarded this as normal since it occurred only at low RPMs. Then I started paying more attention to it and wondering about the flashing. It would flash only between about 800-999 RPM. At 1000 RPM or higher it did not flash, at lower than 800 it did not flash, all the way to idle it still did not flash. On start up before the alternator is producing power the light is on steady, when the regulator breaker is pulled the light is on. I sorta expected it to come on at low RPMs, but why is it flashing? and why does it not flash at idle where it might seem more 'normal'?

I checked for information about a flashing light and searched online. I thought that surely the flashing light is telling me something and what it is saying should be in a manual somewhere. I could not find anything about a flashing light. I contacted support via email and explained what I'm seeing. They did say that the light isn't supposed to flash.

My voltage gauge and ammeter appeared stable when the light was flashing. I have a cigarette lighter USB adapter that has a digital voltage display. At 800-999 RPM it was fluctuating pretty rapidly.....hmmm. Interesting.

Side note, that adapter has a blue LED readout and is exceedingly difficult to read in any condition except pure darkness. Some engineer needs a swift kick the pants.

Going back to contacting the manufacturer, their support's first thought was a either a bad voltage regulator or a loose wire. The install had about 35 hours on it and all the connections are clean, tight and checked out good. They gave me an RMA to return the regulator for testing, but I didn't want the airplane to be down while waiting on shipping and testing. So, I bought another regulator, if nothing else I'll have a hot spare ready to go.

The new regulator came with a different base plate than the one that came with the kit. Neither one fit the standard voltage regulator bolt pattern, a very annoying engineering failure. Rather than fabricate a new plate to adapt the new regulator I moved the internals from the new one to the old base plate. The new regulator behaved the same as the old one. The light blinked between 800-999 RPM. I also noticed that if I had a load on the system, Nav lights for example, the light did not flash. Turn the load off with RPM at 800-999 and the light started flashing. That's odd, what the heck!?



I talked with all the local airplane guys and no one had any ideas on what could be causing it. Plane Power (Hartzell) support didn't have any ideas after I explained what I've done up to now. They suggested that since everything was working normally except for the flashing at 800-999RPM, that it must be normal for my installation. I checked the connections on the factory provided connector that plugs into the alternator, that was all tight and checked out good. I wondered if something in the alternator itself was having

problems at that RPM range, bad or marginal diode perhaps?

Not really satisfied with the answers support was giving me I tossed the tale out into the piranha infested sea that is Facebook and waited. I netted a couple comments but no solutions until Victor Grahn spotted my post from the safety of his perch overlooking the Internet. He sent me an email and provided a summary of his **2017 Winter Newsletter Tech article**. What he described seemed to be a very good match for what I was seeing, and the fix was very simple to do.

I'll recap briefly; the Plane Power alternator uses a jumper between the 'sense' terminal and the 'enable' terminal. The sense terminal is where the regulator 'senses' the buss voltage and adjusts the alternator output accordingly, either raising or lowering the voltage as needed. The 'enable' terminal is the power wire to the regulator.

That's a quick and simple way to connect the sense terminal to the buss, but there is a hidden gotcha. That wire runs through a breaker/switch that might have higher than normal resistance due to age and use. That resistance can cause the regulator problems in sensing the buss voltage.

The solution - remove the jumper and run a separate wire from the sense terminal to the buss, or you could replace the switch/breaker. It's faster and easier to add the wire so that is what I did.



Factory - installed jumper connecting the sense terminal and the enable terminal. This jumper should be removed, and then a separate wire installed from the sense spot on the regulator directly to the aircraft electrical bus.

I think the breaker is fine for its assigned task but isn't up to the task of allowing the fine voltage sensing that the regulator needs. The light stays out now when the engine is running, even at idle. The alternator is carrying the load very well and voltage is stable. I provided this information back to Plane Power so hopefully the next person struck by a flashing light will get a better answer from support. Thanks Victor!

Re-printed below is the portion of Victor's article on the Plane Power Alternator install covering the wiring of the "sense circuit" for the regulator.

Victor says...

The regulator is shipped with a "sense" jumper between "enable" and "sense" post on the regulator.

4A. Ok, what this wire does is that the regulator needs to know buss voltage so it can regulate voltage up or down depending on how many electrical appliances you have running and how fast the engine is turning. So....." they" (whoever came up with this install) took the easy way out and just tapped off the 5amp field switch. Sure, that's easy and one less wire but...

4B. It's a mistake. Granted a long-term mistake. Why? Because this switch will be turned off and on countless times and somewhere in the future, probably long after you sell your aircraft someone will cuss you out. The reason? Simple.

4C. Turning the field switch on and off "X" number of times builds up resistance and over time will add a built-in load to the sense line, causing the alternator to put out more voltage than it needs or should. End result?

4D. The alternator will over produce and do one of two things, continually trip off line or fry your electronics. I have personally troubleshot this very issue on other aircraft and even cars, trucks and motorcycles. It is not a straight forward issue to troubleshoot. Many, many techs, automotive, aircraft and otherwise have replaced perfectly good alternators and regulators when the problem is elsewhere.

4E. Do some future person a favor.....it might be YOU! Run one more separate wire directly from the sense spot on the regulator directly to the aircraft buss. Years later some lucky person will appreciate your extra efforts.



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Jack Hooker Freeport Illinois

... Christian Vehrs



I hate to admit it, but I am not the new guy anymore. But I remember when I was – it was 1996, my first convention in Faribault Minnesota. I remember being excited to be around all the cool airplanes just like the one I flew up from Atlanta. But even back then, I quickly figured out that that this organization is about more than cool airplanes. It was about the friendships that I saw in that special group of people.

After a few conventions, I became familiar with some of the faces. But I also noticed that there is a camaraderie that is formed when special folks continually step up to serve, provide out of their own expenses, and then further our association in ways that are unique to them, but from which we all benefit. Jack Hooker is one of those folks.

I first really noticed Jack at the convention banquet on Saturday night when he started giving out door prizes.

“And next up, a set of Hooker Harnesses from our good friend Jack Hooker”.

What? Hooker Harnesses are made by a guy named Jack, and he is sitting just two tables away from me.

Wow - all the cool kids have Hooker Harnesses in their airplane. I sure wish I had a pair of those. I clenched my ticket and hoped. After all, it was about a 100:1 shot judging from the size of the crowd in the room.

Rats - some guy in Michigan. Oh well. Still, it was pretty cool seeing the owner of the company right here in our midst. I wonder what he is doing here with such a humble group of folks. I guess business men and salesman go where ever their product goes. Anyway, the convention was fun and I made some new friends.

The next morning, Jack hopped into his red and Orange 120 (N2648N) and flew home. How about that - Jack flies a Cessna 120 just like the rest of us.



Over the next several years I really started noticing that Hooker Harnesses are at all the airshows and conventions I attended. Jack has made quite a reputation with his harnesses and I wanted to find out more about him.



Hooker sponsors the Aeroshell Aerobatic Team



Hooker sponsors Kirby Chambliss and Red Bull



You will even find Hooker Harnesses on Space Ship One

Fast forward to the summer 2019. I called Jack and told him that I would be in Chicago and asked to drop in for a visit. Jack was gracious and invited me to visit him, as well as take a tour through the Hooker Harness facility in Freeport.

Jack got his start after graduating from high school in Youngstown New York by working with his Dad, Tom Hooker in the family business.

Jack was drafted and served the U.S. Navy, and was assigned to a crew refueling search and rescue helicopters in and around Korea and Vietnam. It was during this time that the USS Pueblo, a Navy intelligence ship, and its 83 crewmen, were captured by North Korean patrol boats off the coast of North Korea on Jan. 23, 1968. This incident became known as the Pueblo crisis.



USS Pueblo in port at P'yongyang, North Korea

Jack returned home later in 1968 and used his skills as a commercial diver around the New York area. He loved telling the story of being the only person to have raised a sunken 35 ft. sailboat from 65 feet at the bottom of the Niagara River.

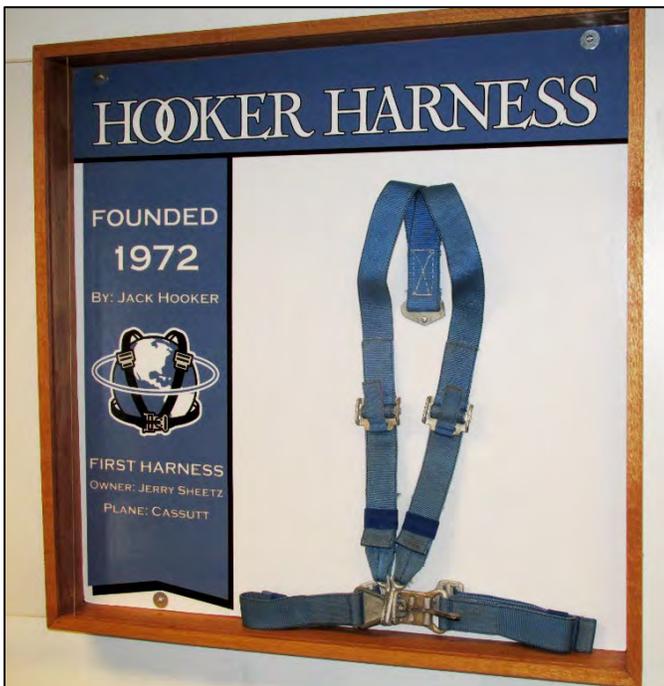
Jack married his wife Susie in 1970, the same year that he completed his pilot training in a Cessna 150. Jack joined a local EAA chapter and was pursuing another one of his passions - skydiving and parachute rigging. It was here that Hooker Harness had its early humble beginnings.

Jerry Sheetz, a member in the Buffalo NY EAA chapter was building a Cassutt racer. The Cassutt Special is a single-seat sport and racing aircraft designed in 1951 for Formula One air races. Designed by ex-TWA captain Tom Cassutt, it is a mid-wing cantilever monoplane with fixed tailwheel undercarriage.



The Cassutt racer reaches speeds of 260 mph on that little Continental O-200 at the Reno Air Races.

Jack was speaking to Jerry when it was mentioned that no one offered a seat belt and harness for experimental aircraft. Often, builders were trying to modify and fit military surplus harnesses as best as they could. Jack went to work by using a friend's sewing machine located in the parachute rigging shop to create his first harness.



Jack's first harness was donated back to him and is on display at the Hooker Harness factory showroom.

Word of custom-built harnesses for experimental aircraft quickly spread at the local EAA chapter and soon Jack had manufactured two harnesses for a Pitts S1.



In 1972, Jack had officially founded Hooker Harness and made a trip to Oshkosh to speak to owners and builders of experimental aircraft to gauge the appetite for custom-built harnesses. The response was so encouraging that he returned and secured his first booth at Oshkosh in 1973. He brought his first sewing machine with him and placed it in the booth, allowing him to manufacture harnesses for owners while they waited, then to install them and fly home.



Jack's first sewing machine is still in use today. Jack says that in this business, sometimes the older equipment is better built and more reliable.

Hooker Harness was still in its infancy and Jack continued his day job with Union Carbide as a metal smith at the facility that makes liquid oxygen.

He continued there until 1981 when he decided to leave Union Carbide and devote his full attention to Hooker Harness.

Jack and Susie moved in 1984 when Susie's job required a move to Freeport Illinois. Susie became the Executive Regional Director for the Girl Scouts of America. The move put Hooker Harness closer to Oshkosh, which proved to be one of Jack's best venues to showcase his product and services.

In 1989, the Russian Aerobatic Champion Yevgeni Frolov was performing at the Oshkosh airshow. Jack's friend had recently become a sales rep for the Russian Sukhoi SU-26 and helped coordinate the arrival of the Russian team to the States.

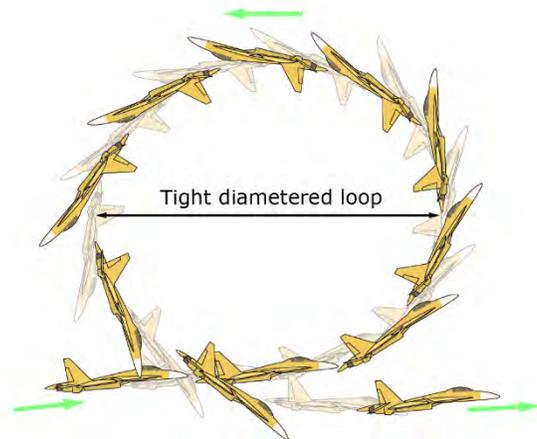


Jack and his friend helped unload the two little Sukhois from the Antonov AN124 which brought them over from Russia. During the days leading up to the airshow performance on Friday, Jack struck up a conversation with the Russian Champion Yevgeni and discovered the pilot's dissatisfaction with the factory seatbelts and harness.

So Jack followed the Sukhoi to Fond Du Lac where Yevgeni competed in the International Aerobatic Championship just two days later on Sunday. It was here that Jack measured the belts and arranged for the Sukhois to stop in Freeport Illinois on the way to the next airshow in Florida. The Russian team was amazed that Jack had two sets of harnesses, matching the color of the airplanes, ready to install on Wednesday. Jack's harnesses employed his new ratcheting belt system, and Yevgeni later told Jack that these harnesses were far superior than the old factory harnesses that the airplanes came with.

Just as a side note, Yevgeni Frolov is probably better known as the pilot who first performed the Kulbit.

The "Kulbit" (also known as the "Frolov chakra") is an aerial maneuver developed by Russian pilots in which the aircraft performs an extremely tight loop, often not much wider than the length of the aircraft itself. It differs from the traditional inside loop as it uses post-stall maneuvering capabilities.



The name "Kulbit" is derived from the Russian Кульбит, meaning "somersault". The alternate name, "Frolov's Chakra", refers to Russian test pilot Yevgeni Frolov, the pilot who first carried out the maneuver. Thanks Wikipedia 😊

Jack's involvement in our 120/140 association came from his own hangar. In 1989 he purchased the red and Orange Cessna 120 that has become so familiar to us all. It was this airplane that prompted Jack to pursue installing his harnesses on factory certified aircraft. This required Jack to learn the FAA process for securing a Technical Standard Order (TSO) for modifying a factory airplane for installation of the harnesses.

That process started when Ray Morin, a FAA Inspector from Connecticut saw a Steen Skybolt with one of Jack's harnesses installed. Ray helped Jack on the three-year process to gain FAA approval for the Cessna 120/140. In the early 1990s, Jack's airplane, N2648N became the first factory airplane to have the Hooker Harness installed.

Jack became an almost a permanent fixture at Oshkosh, Sun-N-Fun and our Cessna 120/140 conventions. Over the next couple of decades, Jack's van with the beer keg garnered wide popularity on the flight lines.



The list of aerobatic teams that rely on Hooker Harnesses is amazing. I just kept taking pictures of the autographed plaques on the wall during my visit.



Dick Rutan and Jeana Yeager 1986 non-stop flight around the world.

By the end of my visit, I had gained so much appreciation for the guy who most of us know as just Jack. But here is a man who served our country in the Navy, and who came home to capture his passion for helping people, showing off a little American know-how, and making a business out of something that he was just having fun doing.

By the way, I finally did get a set of those cool harnesses with the ratcheting belt system in a color to match our 1947 Cessna 120 (N2032V). And yes, it was a door prize at a convention. The prize was awarded to Dorchen Forman who many of us know and love. But since she already had a set, she graciously gave the certificate to me. Jack approved.

Stay tuned for part 2 next issue – Jack retires!



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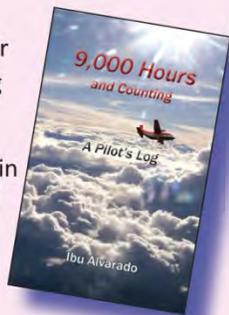
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International Cessna 120-140 Association

December 2019

2020 Wall Calendar



September 2020



Gaia Marrs, Cessna 120, N73046



Uno Part 4

The discovery, recovery and restoration of the prototype Cessna 140A



... Ken and Lorraine Morris
 See Summer 2019 issue
 for Uno part 1
 Fall 2019 for Uno part 2
 Winter 2019 for part 3

Part 4

Disclaimer: This is taking awhile, and I may repeat myself... Sorry! I know you thought it was going to fly in this installment, but you were WRONG!

So now the fuselage skins have been replaced, all aft of the rear door posts. We had it all apart and started to look at all the other pieces that had to go back on. As the skins were removed, Ken would make a new one, and we would try to get it back on to keep the integrity of the plane intact. I didn't get it all stripped at once, so it seemed that as I would get a skin stripped, we would discover bondo and hail dings all over, and decide that skin needed to be replaced. Then I would go to the next skin, strip it and hope for the best.

When you are stripping paint, if there is bondo underneath it, it will strip differently. It doesn't seem to bubble up as quickly and acts differently than regular paint. We were quite a site because as we watched the paint bubble from the stripper we would stare at the places that weren't bubbling quite as fast. We would watch the slow bubbling and hope it was because the stripper wasn't as thick in that area, or some other reason, but keep hoping that there was no bondo underneath it.

One of the things we did while we were at David Lowe's was to have him repair our gear boxes. Both had major issues, but he had them fixed in no time! After the fuselage skin under the seat pan was on, Ken was able to reinstall the gear boxes. (this was briefly covered in Part 3).



Lorraine stripping paint – hoping for the best.



After the gear boxes were on, we were able to install the forward door supports that connect with the forward gear box bulkhead.

We discovered in a previous installment that the forward gear box bulkhead (that the forward part of the gear boxes attaches to) had cracks and tears in it. Univair makes these, and we were able to get one for the measly price of \$400. Thank goodness they had a Free Shipping sale going.

The cabin fuselage center section rib assembly is the piece that goes above the doors and connects to the cabin top skin. This part connects the forward door posts to the rear door posts and has the holes in it for the fuel gauges – the top of the door opening.

While we were taking the fuselage apart we found that both of these pieces (left and right) were pretty hacked up and full of corrosion. The round holes for the fuel gauges and cross vent fuel tubes were elongated or hacked up. These are just some more of the parts we were able to pickup from David Lowe. The ones we got from him had never been installed before.

On the 140A, there is a channel that is riveted on the bottom of this fuselage rib. This is where the 140A headliner tucks in, kind of like the Cessna 150s. This channel is missing on both sides of this plane. They are very hard to come by so will probably have to be manufactured by us.

So we got it all in place, made sure it was squared up and riveted it all together.

In the meantime, (like he didn't have enough to do), Ken took the Stabilizer completely apart. He found some corrosion on the bottom skins. No, let me correct that. He found LOTS of corrosion on the bottom skins and hail dings on the top skins.



The leading edges were pretty good, but the inboard section of the leading edge skins on both sides had been hacked up and holes added so somebody could patch the top of the center section. We found that the center bracket under these skins of the stabilizer was cracked.



Once again, David Lowe to the rescue! Ken was able to re-skin both the top and bottom of the stabilizer. All the internal parts were removed, cleaned up, primed and reinstalled. All nut plates were replaced with new.





More ugly Horizontal Stabilizer hardware was discovered during disassembly.



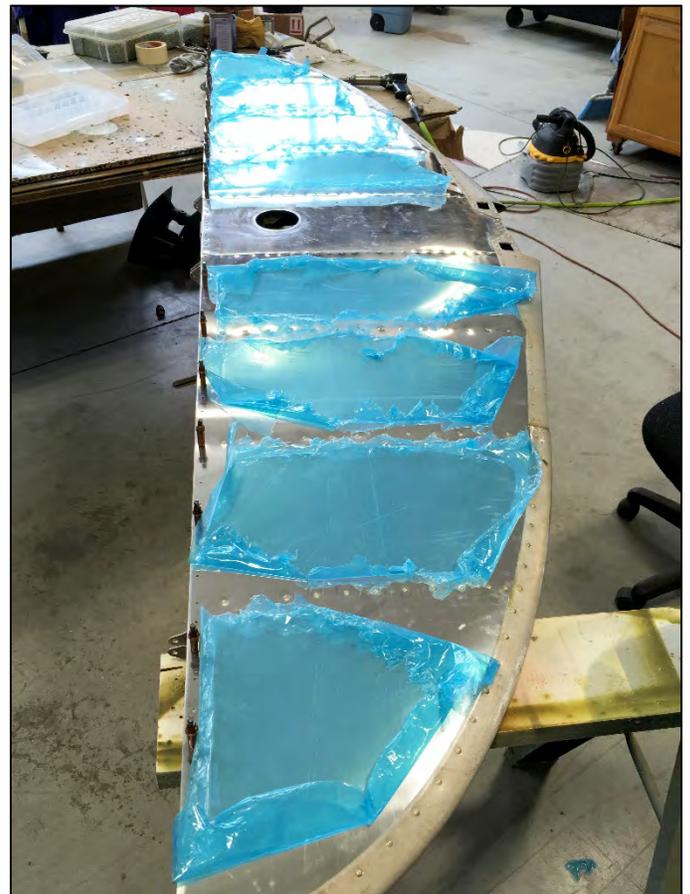
Horizontal Stabilizer skins fitted and ready to rivet.



Horizontal Stabilizer disassembly and inspection.



Horizontal Stabilizer parts, cleaned and primed.



Ever wondered what a new Horizontal looks like?

Right Elevator

The right elevator had lots of hail damage on the top, but it also had the wrong trim tab.



Smaller trim tab that is correct for the 120 – 140s.



Larger trim tab specific to the 140A model.

The C140A had a larger trim tab because the flaps on the C140A are larger than the straight 140 and the 140A needs the extra trim tab surface area. Ken reskinned the right elevator and we found a serviceable 140A trim tab. Now we have to reskin the left elevator...

Every pulley and bracket in the fuselage were removed. Even the brackets that were riveted on were removed, cleaned or sand blasted, primed and reinstalled.



Most of the pulleys hadn't ever been removed. They were GROSS. We cleaned them all, lubricated the center bearing in the pulley, and reinstalled them. We had to replace almost all the cables. Many were rusted, some were frayed. McFarlane loved us!

Wings

We checked in on the wings that were in Oshkosh getting reskinned and repaired. Myers Aviation had taken the wings apart and epoxy primed the insides. It is a good thing too, because it had lots of character. Myers did any and all repairs that were needed as well as replacing all the skins.



Ken at the Myers Aviation facility

The biggest reason we had this done is that there were all kinds of repairs from the early 50s that were suspect, many places that had extra inspection holes (repairs made through them). And there was hail damage all over the top.



We got the wings back, and they look fantastic. They will polish up great.



We got the boot cowl back on, then were able to install the straps that go beneath the gear boxes. Once those were on we could put it on the gear and it would move around better.



Originally we thought all we had to do was reskin the wings to get rid of the hail dings on the top and get it looking good. But Myers found all kinds of suspicious repairs and weird stuff inside we it became a repair and reskin. Myers has a wing jig and can do it right.



Stay tuned for part 5 ...Ken and Lorraine



Georgia

Upcoming Events



Germany

Vintage Days June 6th, 2020

Our Georgia State Representative invites everyone to join the fun for the Vintage Days celebration at our home airport. Alexander Memorial (GA2) is the home of Candler Field Museum, Barnstormer's Workshop and Barnstormer's Grill. What could be better than that?

Each year proves to be a great time to see a wide range of vintage vehicles, as well as visit our friends from around Georgia, Florida, Alabama, Tennessee and the Carolinas.

See you there! Christian Vehrs



Our International Rep in Germany invites us to join the European Cessna 120/140 Fly-in, Wershofen Germany

5th Nostalgic Air-Picnic

The Fly-In will take place on the first **September weekend 5th – 6th 2020.**

This bi-annual fly-in has evolved into the nicest fly-in I've seen in many years and has been attracting more and more rare vintage airplanes each time. The permission to land will be arranged by the local glider club for each airplane that's registered – no hassle for the pilots!

<https://www.flugtag-wershofen.de/air-picnic/>

<https://classic-cessna.jimdofree.com/cessna-associations/>

Thank you! Wolfgang





2020 INTERNATIONAL CESSNA 120/140 CONVENTION (KDVN) DAVENPORT, IOWA SEPTEMBER 8-12, 2020



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Tuesday September 8th- Arrival Day
Dinner at the hotel

Wednesday September 9th
Tentative Fly-Out to Hirsch Field, Amana Ia.
Lunch and shopping or
Shopping and Lunch in LeClaire, Ia.
(Buffalo Bill Museum and American Pickers)

Dinner at airport



Thursday September 10th

Tour of John Deere Plant and John Deere Commons



Mississippi River Dinner Cruise on Celebration Belle



Friday September 11th

First Timers breakfast at the hotel
Maintenance Forum- at the airport

Flying games at the airport

Banquet at the hotel



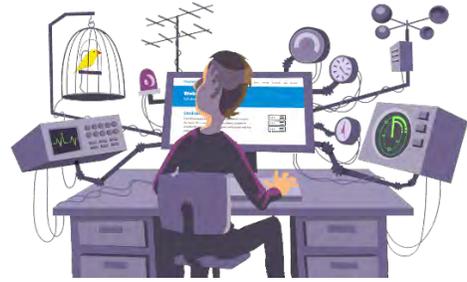
Saturday September 12th

Farewells





A note from our Webmaster Rob Swanland

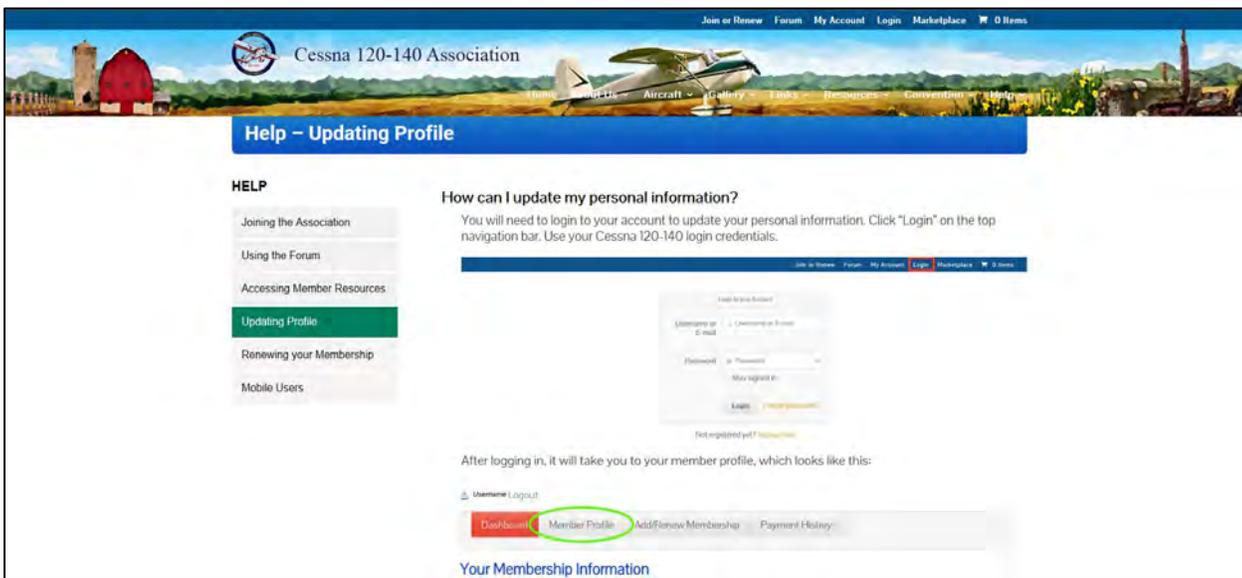


Rob says...

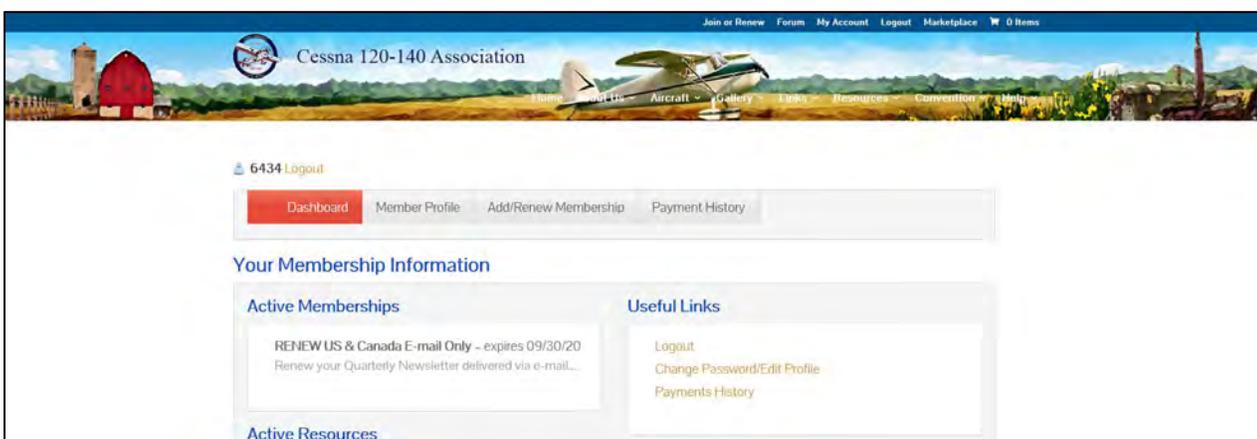
Our new membership system has brought the process of joining or renewing Association membership in line with the latest technology. We encourage everyone to look for the **renewal notices and then renew online**. Step-by-step instructions can be found using the following link: <https://cessna120140.com/renewing-your-membership/>.

IMPORTANT: A number of **addresses are missing from member profiles**. We can't deliver calendars without a physical address. Please take time to **login to your member account and verify that your membership record is complete and accurate**. If you need any assistance please contact Rob via email at membership@cessna120140.com.

You can easily update your profile using this link; <http://cessna120140.com/updating-profile/>.
When you do – it takes you to this screen;



You'll simply login using your Username/E-mail and password, and that will take you to this Dashboard screen ;



Click on the Member Profile tab;



Double check everything, especially your mailing address, so you can be sure to receive the calendars and the hardcopy newsletter issue (if you have selected that option in your membership dues).

Yep, that's me, your friendly neighborhood newsletter editor.

There are several information boxes, all optional of course.

A screenshot of the 'Personal Information' form. It contains the following fields: '* First & Last Name' with 'Christian' and 'Vehrs' entered; 'Mid Name' (empty); 'Business' (empty); and '* Your E-Mail Address' with 'christian.s.vehrs@delta.com' entered. A small note below the email field states: 'confirmation email will be sent to you at this address.'

At the very bottom, you can select to be excluded from the directory if you like. Finally, click on Save Profile.

A screenshot of the 'User Consent' form. It features a checkbox labeled 'Exclude from Directory' which is currently unchecked. Below the checkbox, a note reads: 'If this box is checked, you will not be displayed in public members directory.' At the bottom of the form is a 'Save Profile' button. The footer of the page contains the text: 'International Cessna 120-140 Association, PO Box 6376, Rockford, IL 61125'.

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