

International Cessna 120/140 Association

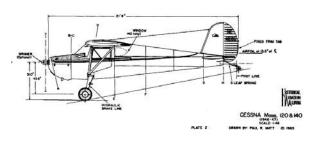
Issue 405 Winter 2017 Nov/Dec/Jan



Kansas homecoming to Cessna Field in Wichita (Convention review story page 4, photo by Roy Aycock)

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Convention 2017 Review



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...by Christian Vehrs and Don Alesi

This year's convention was a huge success, mostly because of the tremendous planning and efforts of our hosts, Brett and Tory Swartzendruber.



I also have to take this opportunity to congratulate them on their ability to hit the ground running, as this is also their first year for them serving as our new Secretary/Treasurer.

This year's convention posed a scheduling problem for me as my job required me to work during the convention week until Wednesday. So it made sense for me to fly out to Kansas the week before and hop a commercial jet home so I could work and then get back to the convention later.



I made an early morning departure from GA2, south of Atlanta on Saturday morning. Hurricane Irma was coming up the East Coast and created a nice 20mph tailwind for the first four hours of the trip.



As I made my way northwest, the clouds started building, but at least they were white and puffy. I knew there was weather ahead of me, and a couple of fuel stops later, I ran into it.



...by Christian Vehrs and Don Alesi



I had to divert from my route and find a place to land when I ran into a line of storms in Neodesha, just an hour from Brett and Tory's place. I sat on the ramp for 30 minutes right next to a nice little 120 tied down on the ramp. It looked like an active airplane, but I never saw this airplane at the convention.



I was able to get back in the air pretty quickly when the line of storms passed and then I was able to stay ahead of them and break out into the beautiful Kansas farmland.

Brett said that more weather was predicted for the rest of the weekend, so he provided a cozy little place for 2032V in his hangar in Moundridge (47K) while I made my way back to Atlanta to finish out my work commitments.

I'd like to say I was the first arrival, but as of yet I had not touched down at the official convention airport in Newton (EWK). That honor goes to Don and Maureen Alesi from Illinois.

We'll let Don tell the story as we catch up with them flying their last leg to Newton.

Don says...Maureen said that we had about an hour and a half of flying to go to get to Newton. We had three hours of fuel in the tanks. My biggest concern was how much headwind we would encounter.

The sky was crystal clear when Maureen called downwind for the runway. Maureen's smooth and calm voice on the radio reminded me why I fell for her the first time I talked to her over thirty years ago. The large windsock was pointing straight out brought me back to reality. I had one more landing to make. At least the twenty five mile an hour gusts was right down the runway. With some minor suggestions from Maureen, "Lil Gremlin" touched down with all the parts firmly attached.



We were guided into our parking spot by a terrific volunteer. We were the first to arrive. While tying the airplane down, Maureen received a call from Lorraine Morris.



...by Christian Vehrs and Don Alesi

Every so often Maureen and Lorraine would exchange texts with the latest wind readings. When the gust went over thirty five, "S--T" was her reply. Maureen texted back "Holy "S—T!". We watched intently as they set up for final. Their 140 bobbed like a cork on final but Ken or Lorraine (I'm not sure) nailed the landing. I can only dream of such ability.

The next day we had a really neat fly out planned, Hutchinson, KS for a tour of the Cosmosphere, Space Center and Salt Mines. The winds let up to mere gusts of only thirty knots. At least it was right down the runway. Almost twenty five airplanes took off while the rest drove. I was able to con Lorraine to fly with me and Maureen to fly with Ken so we would get some much needed instruction. Lorraine showed me how to keep the airplane centered down the runway and how picking up a wing and using shadows to see unsuspecting airplanes was something not taught in flying school.



The Cosmosphere and Space Center has a great museum. I bought a kids space helmet for a memento and embarrassed Maureen all week by wearing it often and telling everyone that I was attempting an altitude record in the 140.



We then went to the Salt mine - an amazing experience. I hate going underground and avoid caves whenever possible. However, this place was huge. So I sucked it up and went down the elevator. I believe that we were underground about 650 feet.



The usual suspects



...by Christian Vehrs and Don Alesi

One of unique things about these salt mines is that they have constant 65 degree temperatures and low humidity, making them ideal for long term storage. For example, the depleted sections of the mines date back to the 1940's and the perfectly preserved trash piles left by the miners give us a peek into the lives and times of the miner's daily lives. On a fun note, the design of a Hersey bar wrapper hasn't changed for over seven decades.



Hollywood has recognized the value of this storage place and rents space here as well.

Thursday morning brought us to the first timer's breakfast. This is a special time when we recognize our members who are attending their first ever convention. It is always the goal of our organization to promote our little airplanes in general, but especially to promote our conventions because this is where the special friendships are made. This year the breakfast was held on Thursday morning.

Thursday was rounded out with our vendor's Tech Forum in the hangar in Newton, finished off by the fly-out/drive-out to Stearman Field (1K1) for dinner. The winds kept up their stiff pace, and no one elected to fly out, but we all gathered for a great dinner.



A very unique fly-out was scheduled for Friday morning to Beaumont Kansas. The name of the airport is officially called Beaumont Hotel (O7S). You land on the runway, taxi into town on the streets and park in front of hotel/restaurant.

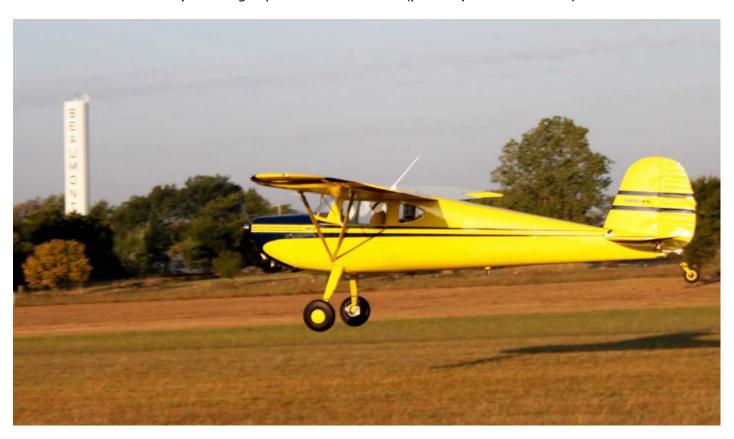


Don fueling up the little gremlin before launching out to Beaumont.

Over twenty airplanes made the flight and people would get out of their cars to take our pictures as we taxied by. I forget to signal when I turned left.



Early morning departure to Beaumont (photo by Lorraine Morris)



Victor Grahn making a picture perfect landing in Beaumont (photo by Bill Sutter)

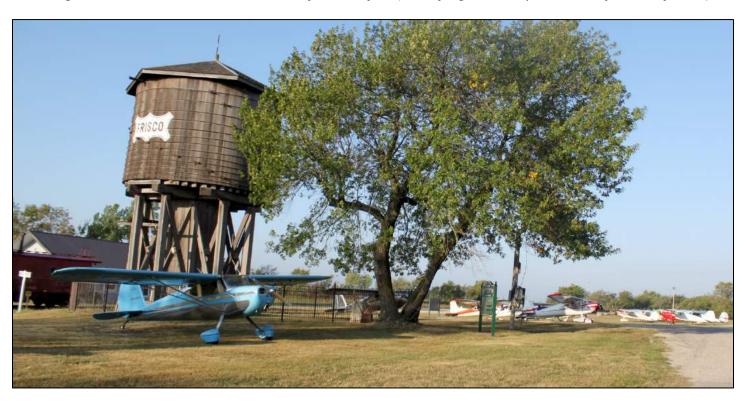


Aircraft Parking





Taxiing down the street to Beaumont Hotel for Breakfast (don't forget to use your blinker for the left turn).



Editor's note; I have to take a moment to say that this is such a privilege we have when we can fly to our conventions. Can you imagine anything better than landing your 120/140 in a place like this?

Actually, I know our members are doing some great flying year-round and we'd love to see and hear from everyone! Please snap a few photos, write a few paragraphs and send them to us © But I digress...back to our convention review.



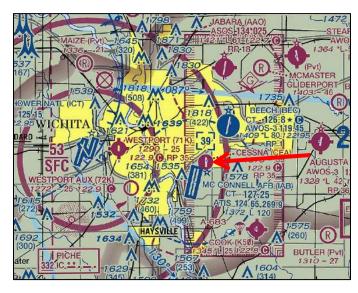
...by Christian Vehrs and Don Alesi

With my work week complete, I was back to Kansas. I met Brett at his hangar Friday morning. We got 32V out and caught up with the rest of the group after they left their breakfast at Beaumont and were heading towards Cessna Aircraft Field Airport (KCEA), the famous home of our beloved airplanes.



It was a pleasure to allow Brett the left seat since his 140 was down for new fabric. Plus, I figured that he knew best how to get us into the special airspace clearance that he and his team had arranged for us (since Cessna field now sits so close to Mc Connell Air Force Base).

The plan was to meet at Augusta for a pilot briefing, and then all fly together to Cessna Field within the time allotted us from the AFB. The timing was perfect and we caught up to our group as some of them were parking on the ramp in Augusta. Brett's team conducted a simple preflight brief and we were off for another *once-in-a-lifetime* experience.









Follow-the-leader brought us right along our flight plan, and we all made it safe and sound to the birthplace of our airplanes. I don't know if everyone felt the same way I did, but there was a sort of an electricity in the air. I watched everyone park their airplanes, get out their cameras, and just walk down the rows trying to take it all in. Twenty four airplanes made the trip that day. Brett's team is trying to confirm that this may be the largest collection of Cessnas on this field for some thirty years (since the factory has been moved to the new facility nearby).



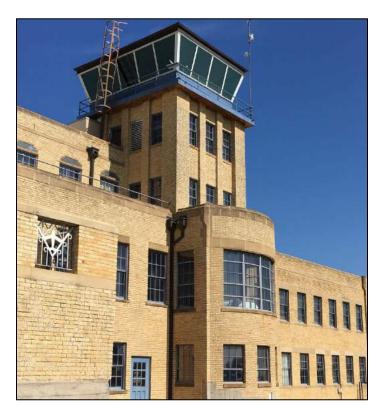






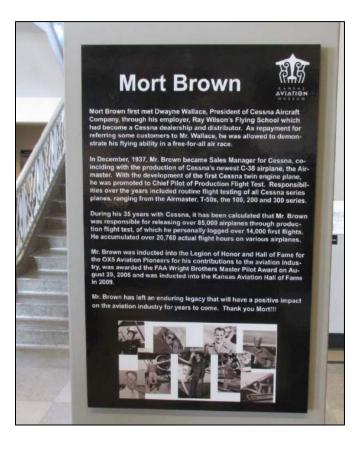
...by Christian Vehrs and Don Alesi

A quick bus ride brought us from Cessna Field to the Kansas Aviation Museum which is located in the old Wichita Municipal Airport that opened in 1935.



Inside and out are filled with displays highlighting the rich aviation history from this area. From the leather jacket worn by Clyde Cessna to a tribute to our beloved Mort Brown, (test pilot for Cessna during the production of our airplanes).







I think I have one of these siting on my desk [©]



...by Christian Vehrs and Don Alesi

Another quick ride brought us to the Cessna headquarters where Brett and Tory's team had arranged lunch for us with a spectacular view of the modern flight line for Cessna aircraft.



The bus ride back to Cessna Field moved our day along on schedule. For me this was especially memorable since Brett graciously found another ride home and let me fly out with my Dad, Allen Vehrs. What a great memory for us to share — flying 32V out of Cessna Field where she had begun her life some seventy years ago.



Friday evening gave us a tremendous dinner back at the convention airport at Newton. We also conducted our annual business meeting and handed out generous door prizes from vendors and friends around our association.





What a great job Brett and Tory's team did collecting door prizes. I am always amazed at the generosity of our vendors and friends.

I must have stepped out to the restroom at the wrong moment – I didn't get to see who won the T-33 behind the other prizes on the table.



...by Christian Vehrs and Don Alesi

Saturday morning brought no relief from the winds, but if you get up early enough, it can be pretty smooth. This affords the opportunity to catch-up with our close friends and do a little airto-air photography. Saturday's outing was to Moundridge, where Brett and Tory call home. It's just a quick hop from Newton, and it's where Tory had prepared a wonderful breakfast for everyone. I am pretty sure the theme of conventions is eating and flying









I just can't get enough of these 120/140s sitting in a Kansas wheat field.





After breakfast, Victor Grahn presented one of his trademark Maintenance Forums while a beautiful collection of aircraft sat outside, patiently waiting the flying games. (photos by Brett Swartzendruber & Blake Mathis).





The good Kansas winds made for some record-breaking short take-offs and spot landings, along with some wonderfully missed flour bag drops ☺



The day turned out to be another one of those great memories that we shall all cherish. The only thing left to do was to fly back to Newton, wash up and get ready for Saturday's banquet, give away some much deserved awards and announce the location of the 2018 convention.



...by Christian Vehrs and Don Alesi

The final night of the convention is always the banquet. A time to remember the times shared, eat some more, and to bid friends farewell for another year. This year, Brett and Tory arranged for a wonderful guest speaker, Mark Novak. Mark is one of the few pilots to be on the active crews of both DOC and FIFI—the only two flying B29s in the world.











...by Christian Vehrs and Don Alesi

After the awards for the flying games and the aircraft judging, our President Virgil Warren made a special presentation. This presentation had never been given before, but as a Board we felt that this recognition may have been long overdue. The award was for State Representative of the Year. We wanted to give recognition to the State Reps who had served as an example for promoting our association and the love for our airplanes. The first recipients of this award are Dick and Nicki Acker from Michigan.



What a privilege it is to belong to and serve in an association that has so many dedicated people who serve so selflessly.

I want to encourage everyone to attend at least one of these conventions soon. Our next opportunity will be in western Tennessee a little north of Memphis - Dyersburg Regional Airport, KDYR. Our host (Tennessee State Rep) Brad Haslett is very excited to have us, and he has been greatly encouraged by the support from the airport, city, and local businesses. Keep an eye out for more details as they come.

Finally, we can't say thank you enough to Brett and Tory!!





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Plane Power Alternator Installation



Recently my generator didn't want to generate. After only about 1000 hours and 17 years it decided it had enough. I did some preliminary troubleshooting and found the brushes very worn, so the generator would require at the least a repair (brushes and turn the armature) or at the most an overhaul. I also checked regulator and found the main power contactor very pitted. (there are three contactors in the standard points regulator; A. main contactor, B. reverse current cutout and C. voltage adjuster), so chances are in addition to a generator repair, I probably would be needing a regulator soon if not right away.

Rather than put more money into a limited system, I opted to spend several hundred more and go with something more useful and modern like an alternator.

As far as STC options (bolt on with minimal paperwork) for our 120/140's there are three.

Fred Lagno's Cessna 150 type alternator.

B&C Alternator, through the Combs STC (Luscombe Association)

Plane Power (now Hartzell Technologies)

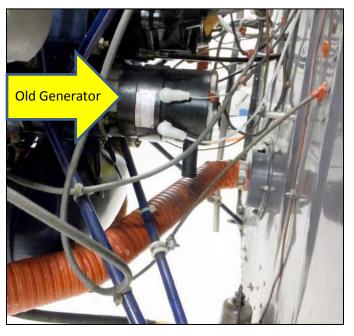
I opted for the Plane Power unit. My reasons were the Plane Power is pretty much a bolt and go install with the necessary parts included (mostly, more on this later) and alternator power right down to 900 rpm, possibly a little lower. It is a modern, small light weight unit.

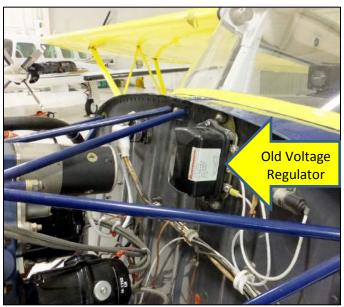
I purchased the Kit through Aircraft Spruce. The kit included the alternator, regulator, a 5 amp circuit breaker field switch, and an alternator fail indicator light.

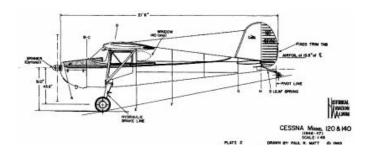
The install is pretty straight forward. Even though I have my own shop, we're busy and I can only "borrow space" on the weekends, meaning I needed to do the install over a weekend. I need the hangar space during the week for "paying customers".

Before starting I thought.......I had all the parts ahead of time. Turns out I needed a 1 amp Circuit breaker for the ALT fail light, which I had to scrounge from "local supply". Meaning my ever present parts bin in the basement.

Starting out, I removed the battery negative wire and the top spark plugs for safety. I also removed the left magneto to give myself more working room. Before I removed the left Mag, I "timed" the mags to the proper BTDC position, meaning once I re-installed the left mag, all I would have to do to ensure proper timing was to time the left magneto to the already present right magneto.



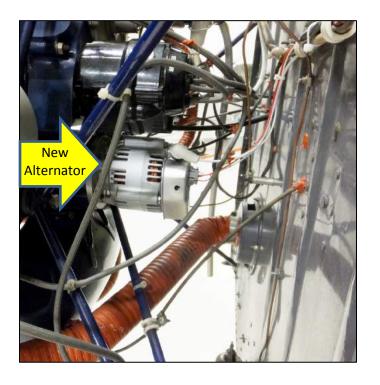




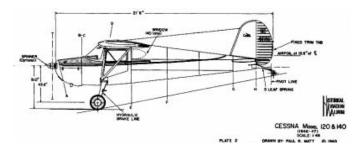
I got the old generator off and regulator. I knew the field wire would be no longer needed, so I removed those from the aircraft. You can re-use the field wire from the master switch to the regulator, but I opted for new wiring and simply removed the two field wires from the master switch.

One step that is critical is bolting the drive gear on the new alternator. I opted to purchase the drive gear kit as I felt it's a bit superior to the original equipment. Also realize you need to make a tool here(unless you happen to already have a 1 ¼ thin wrench) this is needed to hold the drive cup while you tighten the drive gear hold down nut. can......I suppose hold the drive gear, and torque away...... but, then your rubber drive bushings absorb the 180 inch pounds + of torque needed to align the cotter pin with the nut and shaft. I don't feel this is a good idea as your drive bushings now start life already very compressed. How long will they be in there absorbing alternator resistance torque? Probably a long time, best to not smash them even before they begin their job. Do it right and hold the drag cup with an inch and one quarter thin wall wrench.

Mounting the new alternator is very straight forward. As is the regulator, other than you need a helper inside the cockpit (that was me!) holding the bolts for the replacement alternator.







With the two units mounted, now comes the fun part. Wiring.

Wiring under the panel is for small agile people. I barely qualify.

You need to mount the 5amp circuit breaker switch (turns the alternator on and off).

Also The ALT fail light. Lets you know if alternator voltage falls below battery voltage. (i.e. your alternator system isn't functioning properly)

And connect wiring to the Aircraft buss.

There are cheap and easy ways of attaching wiring to the buss and you can do it on the firewall side, but I prefer my wiring professionally done inside, as if the airplane was made that way.

Testing the system out is straight forward.

- A. No oil leaks at run up.
- B. With master on and the engine not running you should see the orange "ALT fail" light illuminated.
- C. Turning on the 5 amp circuit breaker switch should extinguish the ALT fail light and your ammeter should show positive.(Or if you have a volt meter it should show about 13.8 volts)
- D. I flew the aircraft twice before I took any trips farther than "Hey pick me up" should anything happen.
- E. I was able to operate the radio, transponder, intercom and lights including my LED landing light down to about 900 rpm before the voltage would drop off and the ALT fail light illuminated.

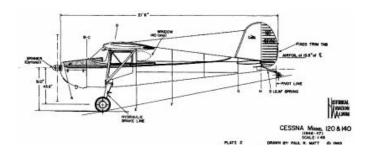
Overall I'm very pleased. I gained 3.6 pounds of useful load and now have a ton more available 12 volt power for those night flights.



Old generator and voltage regulator on the scale – slightly over 11 pounds



New alternator and voltage regulator on the scale – just under 7 1/2 pounds.



Observations and Comparisons.

- instructions weak. 1. The are little Fortunately full instructions and "COMPLETE" wiring diagrams are available on line. I'm surprised that not everything comes in/with the kit, including a good wiring diagram set, airplane application list, voltage regulator mounting instructions (does it have to be shock mounted? No, proper grounding? Yes, "figure it out on your own)
- 2. You should have access to a thin 1 ¼ wrench, I highly recommend it.
- 3. You need to come up with your own 1 amp protection solution for the ALT fail light.
- 4. 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...

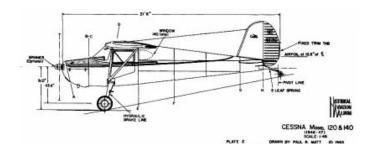
4B. It's a mistake. Granted, a long term mistake. Why? Because this switch will be turned off and on countless times and somewhere in the future, probably long after you sell your aircraft someone will cuss you out. The reason? Simple.

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 forward not а straight 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.

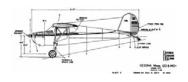
5. Why not the B&C alternator via the Combs STC. Simply for me it was that STC requires all voltage regulator and associated parts to be mounted on a single board. The board is quite large as I recall, about the size of a mini I pad or perhaps bigger. Also the STC calls out that this Circuit board (if you will) should be installed inside the cabin. Ok, where in the world do you install something that large under the panel. For me there simply isn't the room for it. (Ken and Lorrain Morris have had good luck getting the B&C installed with a normal regulator mounted by itself, via field approval)



- 6. Also, and I have no direct knowledge other than members who have the B&C alternator set up have told me but, below about 1300 rpm it doesn't have the juice to power everything up. I wanted electrical power down to idle.
- 7. Lastly if you have the old time Cessna 150 alternator, the plane power is lighter, newer and does the same thing. I believe even Fred will tell you if you call him about his STC, that you may be better off with a more modern set up.

7A. Fred does take calls occasionally from members who have an older Ford Alternator (got it cheaply, free or something similar) and want to install it. Or perhaps they have purchased an aircraft with his STC on it. Call Fred up, he is willing to support your needs, and he will still sell the STC, but you are on your own for parts procurement. 7B. If you purchase Randy' Thompson's 0-200 STC, the alternator install is part of the STC. Once again, this is the older Cessna 150 type alternator.

Lastly, if you have any questions about the various installs, or need more information than I have provided here with my brief summary, please don't hesitate to contact me, I should be able to walk you and/or your technician through the various options or installations.



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