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EAA Chapter 461 is a 501(c)(3) non-profit charitable organization based at Bolingbrook's Clow International Airport (1C5)

FROM THE LEFT SEAT!



Greetings Chapter 461,

The outside temperature is getting colder every day, and the outside characters are looking more spooky by the minute. I suppose that means Halloween and shorter days are right around the corner. Never fear, 461 is here! And the colder October weather, accompanied by a few shady characters, did not slow us down a bit!

Okay, okay... rather than trying to trick you with my frightening writing (it is, I know), I will skip ahead and treat you (Booooo...) to a review of this month's activities.

October 5: Mary Elizabeth Kurek, Dina Romanova, Maria Kalan, Dante Gentile, Ozan Kalan, Joe DePaulo, and I attended the Illinois Aviation Hall of Fame Banquet where I had the honor of accepting a 2023 Spirit of Flight Award on behalf of all the amazing and remarkable people that are EAA Chapter 461. It is impossible to overstate how proud I am of who we are and what we do. Thank you for entrusting me to represent this amazing organization.

October 7: Dina Romanova, John Tatro, Ozan Kalan, and I had a blast at the EAA Museum in Oshkosh where we helped Matt Hissem setup, operate, and disassemble his Mercury and Gemini mockup space capsules at EAA Space Day 2023. I would like to offer a special thanks to Al Bally for (last minute) printing 200 11x17 reproductions of a Mercury capsule paper model originally produced by Douglas Aircraft in February 1962. We built one of the models and included it in our display. It was a simple model, but attendees truly appreciated our nod to the Mercury capsule manufacturer.

October 14: We had planned to host our final Young Eagles rally of the year, but the weather had different and incompatible ideas of its own.

October 21: Several chapter members joined the Illinois Aviation Museum in support of Clow's fourth annual Haunted Hangar. I think it is safe to say the event was significantly more popular than expected. Good times were had by all, and we realized that we will need to be better prepared to entertain the masses in 2024.

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October 22: Our volunteer pilots and ground crew teamed up to host a bespoke Young Eagles rally where we flew ten members of Boy Scout Troop 309 from Lake Zurich as well as six young persons from the Our Children Foundation.

October 28: Our amazing volunteer pilots and ground crew closed out our 2023 Young Eagles season by flying 37 kids for an annual total of 290 flights. I would like to thank RV Bob Kopeika for influencing a GREAT call on the day's weather. We had been agonizing over our GO / NO GO decision for HOURS on Friday afternoon because the weather forecast and actual conditions were as disparate as could be. We did not want to cancel our final rally of the year, but we also did not want to call for a "false start" and waste anyone's time. RV Bob suggested we postpone the call to 7 am Saturday morning, and it ended up being the perfect call. Thanks RV Bob!

Hangar Happenings

The Hangar Posse have taken our hangar to the next level, folks. Rick, John, and Tony have organized the place in amazing ways, and Oz has made the lounge into a gem. If you haven't seen it in a while, come on out - you will be very pleasantly surprised!

Our next adventure will be finalization of the flight simulator lab. We have several computer system upgrades planned, and we are seeking donations of funds, parts, or both to help maximize the capabilities of our six flight simulators. If you are able to contribute, please make yourself known!

RV-14A Update:

On October 27, Van's Aircraft posted an update outlining several significant challenges their business has faced over the past few years, and they have announced several changes in their day-to-day business operations. According to the release, their next update is expected in mid-November.

<https://www.vansaircraft.com/2023/10/business-announcement-from-vans-founder-dick-vangrunsven/>

Thank you for a spectacular month, everyone! I'll see you on the flightline.

VFRs

P.S. It IS time for pumpkin spice!

P.P.S. For those following along, my dad went home on October 29 after having quad-bypass surgery on October 24. On October 30, he was vacuuming his house. It is safe to say he is making a fantastic recovery! My family and I thank you for your concern and support, my friends!



461 HAPPENINGS @ Clow

MONTHLY MEETINGS:

The Chapter meets on the first Thursday of the month at Clow International Airport, typically at the Illinois Aviation Museum starting at 7:00 pm. Family members, extended family and guests are always welcome.

HANGAR NIGHT:

Every Thursday evening from 7 pm to 9 pm we host a “hangar night” where we learn, we build aircraft, we socialize, and we work on our hangar.

No experience is required, no membership dues must be paid, and no expectations are set.

Come out, meet friends you haven't met yet, see what the buzz is all about, and join in the fun!

YOUNG EAGLES:

We fly Young Eagles (kids ages 8 thru 17) on the 2nd Saturday of each month - April thru October - *weather permitting*. Starting at 9am and running till about noon.

CHOW @ Clow

Join us Sunday evenings at 5pm for Food, Fellowship and maybe some Flying at the 461 hangar. Bring your own food as we hang out and wind-down the week!

THE BREAKFAST CLUB @ CHARLIES

Come out to Charlies on Saturday mornings at 7am and have breakfast with 461 members. Some of these characters can even tell you about the other Breakfast Club they were apart of back in high school.

A FLIGHT TO MEXICO

by Rick Ernst

The aviation magazines are right: flying GA to Mexico is safe, easy, and fun. A few weeks ago, John Tatro and I made just such a trip, no flight plan filed. A three-hour flight in Access Aero's Zenith 750 Cruiser got us from Clow to sunny Mexico—Mexico, Missouri, that is.

Mexico is home to Zenith Aircraft, our destination for Zenith's annual Homecoming fly-in event (this year, on September 15 and 16). Homecoming is an opportunity for Zenith pilots to reconnect with one another, for potential builders to learn more before taking the big step into airplane construction, and of course, for builders/pilots to return their airplanes back to where they first began to take shape. By Oshkosh standards, Homecoming is a small affair, but being able to walk the entire grounds in just a few minutes compensates for the size. Plus, the more focused feel of Homecoming is a great complement to the spectacle and splash of Oshkosh.

I flew the outbound leg from Clow to Mexico (KMYJ), about 100 miles northwest of St. Louis, on Friday the 15th. We had the sun at our back and good VMC, if perhaps a bit hazy. This was the longest flight I've made so far in N611AM, so it was a nice opportunity to learn a bit more about the GRT EFIS that is the center of the Cruiser's panel. It's no secret that redundancy is the name of the game in aviation. In addition to the GRT's moving-map display, John had FlyQ EFB on his iPad, and I'm sufficiently old-school that I always travel with paper charts. I find nothing quite as satisfying as flipping over a sectional to mark my progress, or better yet, switching to another sectional.

We arrived at lunch time and were lucky to meet Rick and Amy from Virginia, who are building a 750 STOL. Not only were they delightful mealtime company, but they were also staying at the same hotel as John and I—and they graciously provided our ground transportation with their rental car. We also happily stumbled upon “RV” Bob Kopeika, who had flown his RV-12 to the event.

This was my first visit to Zenith Homecoming, and it won't be the last. Over the two days of the event, seminars covered topics like engine selection, avionics, construction techniques, and painting, among others. (Even though 1AM is flying, it's still interesting to learn more about such things.) RV Bob made the case for vinyl covering when he spoke at the seminar on painting. I even learned a few things about aviation insurance during one session. I particularly enjoyed the tour of Zenith's factory; I could watch the CNC router all day. Zenith is expanding their facility beyond their current single, modestly-sized hangar. It's good to know their business is doing well.



continued

RAY FOUNDATION'S MATCHING GRANT FOR EAA EDUCATION CENTER

The Ray Foundation, which has been a dedicated supporter of EAA's youth education programs for more than 30 years, has again committed to a campaign to support the popular activities at the new EAA Education Center in Oshkosh.

A \$600,000 matching grant has been established by The Ray Foundation, as it will match every dollar committed to the Education Center and its programming by other supporters between now and July 31, 2024.

"This doubles the opportunities with every dollar supporting the Education Center," said Margaret Brill, director of the EAA Aviation Foundation. "The Ray Foundation has seen the enormous benefit to aviation education that has already occurred at this facility in just over a year, and this is a way to ensure that EAA can focus on the quality, widely available programming that helps the discovery of possibilities within flight."



The mid-September weather was just perfect for Friday evening's banquet, held on the ramp in front of Zenith's facility. Just after dinner, Sebastien Heintz, owner and head of Zenith (if you aren't already aware of this—compare the letters in Sebastien's family name to the letters in his company's name) gave a warm address to the crowd and asked everyone who flew a Zenith to the event to come to the front of the crowd and say a few words. I talked about operating our Cruzer as a flying club, while John gave a quick history of 1AM as the product of EAA's Give Flight project. It was especially gratifying the next day when an event attendee who is building a Zenith stopped to ask us for more information about forming a flying club.

John piloted the return leg back to Clow on Saturday. Even as we were enjoying the second day of Homecoming events, we kept one eye on the weather, as rain was forecast for much of the en route area. We elected to depart at noon to stay ahead of the weather. Although Saturday did turn out to be decent VMC, John had to fly us over, under, and around the clouds. I'd say we were toward the bottom of the "green arc of VFR safety:" still quite safe, but with enough challenge to make it a good learning experience.

This flight was a great exercise in crew resource management. Throughout the flight, John and I discussed our options, including turning back toward better weather. VFR flight following from St. Louis Approach in the vicinity of the Peoria class C brought us another set of eyes looking for traffic. Throughout the flight, we were able to remain well ahead of the airplane and well ahead of the weather.

Both the flight and Homecoming had so much of what we love about aviation: a bit of adventure, an opportunity to use and expand our skills, and a great way to share time with people who share our passion. I can't wait until our next away mission in the Cruzer! Fly-out anyone?



**AVIATION STAKEHOLDERS
RESPONSE TO EPA
ENDANGERMENT
FINDING
ON LEADED AVGAS**

A coalition of aviation stakeholder organizations issued the following joint statement regarding the U.S. Environmental Protection Agency's (EPA) endangerment finding on lead in aviation gasoline (avgas) issued on October 18:

"We are working with the Administration toward the ultimate elimination of lead from avgas, and this finding mirrors and reinforces our shared goal of, and plan for, an unleaded fuel future. This finding is another step in the process, with rulemaking and other regulatory steps still to come, for developing and deploying viable unleaded avgas alternatives. We remain committed to removing lead from avgas by the end of 2030 or sooner, and are making considerable progress toward the introduction of market-viable high-octane unleaded replacement fuels that meet the safety performance needs of the entire U.S. fleet of piston aircraft."

"It is important that the flying community and the public understand that aviation safety depends on an orderly, nationally coordinated transition to unleaded avgas. The premature removal of an essential fuel that many aircraft require for safe operation, before a replacement is available, would compromise the safety, efficiency and economic viability of the U.S. airspace and airports, the general aviation industry and transportation infrastructure. "While the EPA finding is a key step in the process, the EPA is not given the authority to ban, regulate or limit aviation fuel. Instead, the EPA's finding triggers further deliberate rulemaking by FAA as the nation's aviation safety regulator to ensure the successful development and deployment of viable unleaded avgas alternatives, given the critical safety and other issues at stake."

Dante Gentile - Eagle Project Boy Scout Troop 13

The Illinois Aviation Museum got a little outdoor upgrade near their entrance earlier this month. If you haven't taken a look lately over between the Museum and hanger #2, you will see a nice looking brick border filled with river rock and plants that spans 54' along the hanger. Our Ray Aviation Scholar, Dante Gentile belongs to Boy Scout Troop 13 based out of Plainfield and he decided that his Eagle Project would be a perfect opportunity to give back to Clow Airport for his appreciation of the scholarship awarded to him from Chapter 461.

He first reached out to the airport itself, but was then directed to Bill Anderson, Facility Director of the Illinois Aviation Museum who didn't hesitate to take Dante up on his offer. Bill suggested that they would like landscaping done along the opposite hanger that faces the entrance of the museum.

The process of this project took longer than expected since Bill's idea about it back in April of this year. The original design idea was a raised bed, but was decided by Troop 13 leaders that this wouldn't be a good idea. After looking at pictures of the area of the hanger, they explained that since the hanger sits on a concrete slab, they were afraid that putting in a raised bed higher than the slab it would encourage rain water to seep into the hanger. It was then decided that it would be better to keep it flat with a brick border laid into the ground. After getting the approval from his Troop, he then needed to present it to Rainbow Council for their approval. Once Dante got the "go ahead" he then had to fundraise for the money to purchase the materials needed which took about six weeks. When he was close to achieving the funds needed, then it was time to order the materials and purchase the plants, time was running out and he wanted to get this completed before the colder weather came in. Bill had suggested early on in visiting Tim Wallace Landscape company for the landscape materials. They were a huge help in showing Dante how to calculate the limestone bedding for the border and river rock. They also eased with the financial part by only charging their cost to him. He was able to get the plants half off due to the end of the season at Home Depot and Menards were the only ones that had "longer" length bricks to help with keeping the border straight the entire length of the run.

Finally, on the morning of October 8th, several scouts, adult leaders and dear friends came out to Clow and knocked out the project in 3 hours time! It was a beautiful sunny day with the perfect temperature for free manual labor. It turned out better than expected and it didn't take a second day to finish up as originally thought.

The final part of this project is that Dante needs to find time to sit down and write up a report detailing managing the project. Write about any problems he encountered and how he worked through them. He needs to calculate the receipts with the money spent and any funds left over will be donated to the museum. When that is all completed it will then be submitted back to Council for final approval. This doesn't mean that he is an Eagle Scout yet. Dante still has four merit badges to complete. He is one of the few scouts that decided to get this Eagle Project completed first since it is the hardest requirement to achieve. Dante has till his 18th birthday (20 months away) to complete the remaining badges.



HOME BUILT ACCIDENT TOTALS SHOW POSITIVE TREND

Last week ended the FAA's fiscal year and with it, the totals for experimental category and amateur-built aircraft fatal accidents for the 12-month period ending September 30. While the rate of accidents based on flight hours will not be available until the FAA releases general aviation survey data next year, the total number of accidents over the past year in experimental aircraft was the lowest on record.

The 28 fatal accidents in amateur-built aircraft over that period was down 28 percent from the previous year, when 39 fatal accidents were recorded. In addition, the 40 fatal events in experimental category aircraft was down nearly 30 percent from the previous 12-month period and fell seven below the FAA's not-to-exceed period for the 2022-23 fiscal year.

"The activity data is necessary to paint the full picture, but the initial indications are very positive indeed," said Sean Elliott, EAA's vice president of advocacy and safety. "It shows a continuing trend toward safer operations, even as total hours flown increase. It reminds us that safety is an ongoing journey that always needs the highest attention of our flying community."

The homebuilt fatal accident total has been cut by nearly half over the past 15 years, from 598 in the period from 1998-2007 to 338 from 2014-23. Over that period, EAA has introduced or championed a number of safety initiatives, including the EAA Flight Test Manual and the FAA-approved second safety pilot option. Those programs complemented the long-established EAA Technical Counselor and Flight Advisor programs.

Grounded

by Ron Monsen

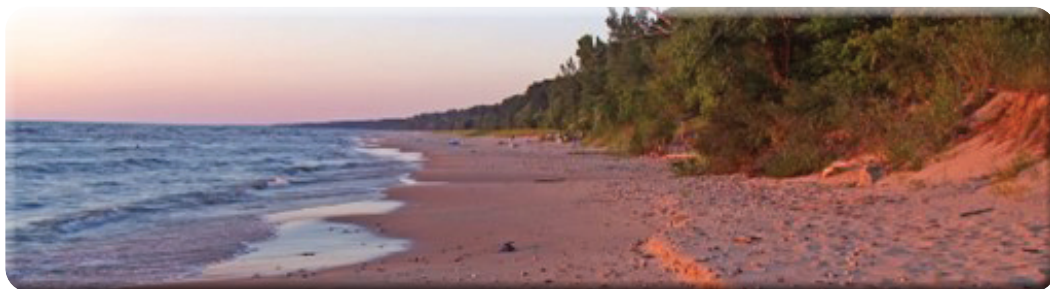
It was a beautiful August evening when I decided to take my wife for a flight up the beach in South Haven, Michigan. I had flown the plane (Sonex) over a few days earlier and we had been vacationing at our trailer (summer home) on the Lake Michigan beach.



The flight was uneventful and we had a nice view of our place along with all the fancy homes from South Haven up to Sagata, Michigan. We came back to South Haven and after landing I stopped at the self-serve gas pump. After gassing up I hopped in to taxi back to my tie down, but when I pushed the starter button I was only greeted by a little cough as the starter bendix engaged the flywheel and turned the prop about five degrees. Hmm.. I hit it again. Same thing – barely moved. Groan... so it was late and I decided to troubleshoot it in the morning.

The following morning I went out to the airport and tried it again. Same thing – just five degrees of rotation and stall. So I took the battery out to see if the contacts were corroded or maybe the battery compartment had some corrosion for the ground to the airframe. The battery is located in the tail and requires putting the tail up on a chair and removing seven screws. I then dropped the battery out and took off the leads. Other than a little oil and small amount of oxidation, everything seemed ok. I put it all back and pushed the starter button. No go. So I took the battery out again and brought it to an auto parts store to test it. They load tested it on two different devices and said it was fine. Rats. Nevertheless, I didn't trust their test and thought maybe the battery was getting old, so I decided to replace it. Of course in South Haven Michigan there was no Odyssey PC680 battery to be had.

I then decided to look at the starter. I called Dan Weseman (helped build the plane and kits the Panther homebuilt). Dan mentioned he rarely sees any problems with the starter but to check the copper ring on the starter solenoid that slams forward into two copper contacts to provide the juice to the motor. Sometimes it gets pitted and just polishing it up can do the trick. I reached the three screws on the back plate through the cowl and took it out, polished it up and put it back. Hit the starter – same old nothing. So I took off the top cowl and removed the starter. My wife needed to be back in Chicago for a family reunion party she was planning so I decided to take the starter back and have it rebuilt or replaced. I had also been in email contact with William Wynne – the most notable expert on aircraft Corvair design, assembly and operation. He gave me the specs on the starter (a Subaru 80s vintage) and also passed along some advice about how to test and troubleshoot. While I was in Chicago I also decided to replace the battery just as a precaution and to completely eliminate it as the culprit.



continued

RETIRED U.S. AIR FORCE COLONEL KIM CAMPBELL HEADLINES WRIGHT BROTHERS BANQUET

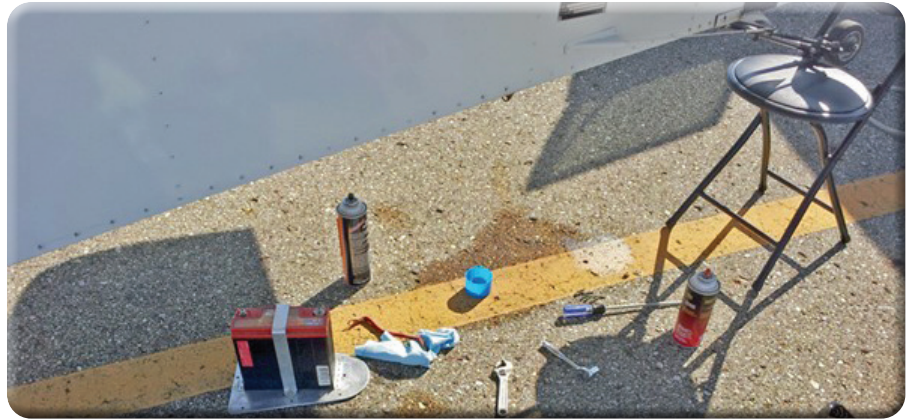
Kim "KC" Campbell, a retired U.S. Air Force colonel who flew more than 100 combat missions in Iraq and Afghanistan, is this year's featured guest at EAA's annual Wright Brothers Memorial Banquet on Friday, December 8, at the EAA Aviation Museum.



Tickets for the event are currently available at the EAA Aviation Museum website. Attendance is limited to 350.

Campbell served as a fighter pilot and senior military leader in the Air Force for more than 24 years. Campbell flew more than 1,800 hours in the A-10 Warthog during her service. In 2003, she received the Distinguished Flying Cross for Heroism after successfully landing her badly damaged A-10 following a completed close-air support mission.

EAA's annual Wright Brothers Memorial Banquet honors the Wright brothers' successful flights at Kitty Hawk, North Carolina, on December 17, 1903, that began the era of manned flight. Tickets for the event are \$70 for EAA members and \$95 for non-members. Doors open on December 8 at 5 p.m., with the dinner starting at 6:30 p.m., and the presentation immediately following dinner. A book signing will take place after the presentation.



I found a local alternator/starter repair store near my house. It was very south-of-the-boarder "local" with starters, junk cars, parts of engines, and all kinds of bits everywhere. The owner (Juan) took my starter, put it into his beat up old testing machine, flipped the switch, and it ran like a top. I asked him if he could load test it so he took the back of a wooden hammer handle and pressed it against the starter gear while I pushed the button. That is a certified Mexican starter load test. He proclaimed it healthy. I told him to rebuild it anyway. A few hours later the starter was ready to pick up. He had not been able to definitively find anything wrong, however he had increased the size of the copper contacts that are engaged by the starter ring. In the meantime I managed to find a replacement battery and purchased it about ten miles from my house in the Chicago area.

I had to wait a day or so because my wife had the party and was leaving for Saudi the next day. I finally headed back to Michigan on a Monday morning with a rebuilt starter and a new battery. I went straight to the airplane and installed both. I pushed the starter switch. Same cough and five degree prop movement -arghh - it must be something else. My next suspect in the continuity chain was the master solenoid. Flipping the master switch on engages a solenoid that provides panel power and makes the main positive power lead live all the way to the starter. If it was bad there might not be enough oomph to turn the starter. So I very carefully moved the wires from the bottom of the solenoid to the top - bypassing it. The word very careful is notable because that is the main positive lead from the battery. When the two wires are together the "Master" is effectively on and just brushing a wrench handle while tightening the bolt against the bare aluminum fuselage would cause a dead short. It went well, I got the two linked together and pushed the starter button. Nope.

In addition - and this was a something I had noticed a time or two before - there was a puff of smoke coming up from under the panel. Smoke? - that did not seem possible. Events were really heading downhill. I could not understand how there was any "smokeable" current getting to the panel. When you push the starter button two itty bitty wires provide a small amount of voltage to a solenoid that sends current to the starter - engaging the starter solenoid and then the real power is through the contact ring on the starter. There are no high amperage power circuits in the panel! It didn't make sense but I needed to look anyway.

I pulled the instrument panel off. That only requires taking off about one hundred screws (just kidding - about twenty I guess) and folding it back. I looked under there and inspected everything. Other than a few "close calls" with switches nearly reaching two junction blocks, I could not find any damage or burned wires. I did find one screw that was the wrong type for the junction block and while screwed all the way in, did not secure the connector it was attached to because it bottomed out before locking it down. So I moved it to the opposite side of the junction block on the same screw as the incoming connector. I tracked it back to the right mechanical ignition switch. Of course this was not part of the starting system so could not be part of the problem. Note: there are two redundant ignition systems. One is electronic and the other is traditional mechanical points. Starting, takeoff and landing with both on, and then turning off the mechanical side in cruise.

continued

FAA GRANTS EXTENSION TO MOSAIC COMMENT PERIOD

On October 4, the FAA published a 90-day extension to the comment period for the Modernization of Special Airworthiness Certification (MOSAIC) Notice of Proposed Rulemaking (NPRM). The new deadline for submitting comments is January 22, 2024.

The FAA granted the extension in response to a request by eight industry associations representing primarily the maintenance and repair communities. These associations include the Aircraft Electronics Association, Aeronautical Repair Station Association, Aviation Suppliers Association, Aviation Technician Education Council, Helicopter Association International, International Air Response, Inc., Modification and Replacement Parts Association, and NATA (formerly known as the National Air Transportation Association).

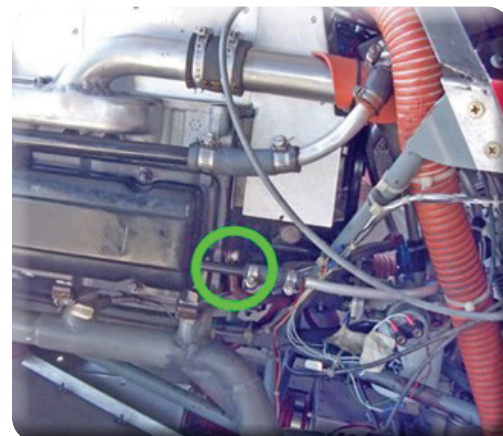
EAA will utilize the additional time to coordinate with key industry stakeholders in the continued effort to understand the NPRM and provide our support for the majority of the proposal while also offering alternatives in specific areas. The additional 90 days being added to the comment period during this time of potential disruptions in government and FAA operations will likely have little effect on the overall progress of the proposal. Recently, members of EAA's Government Advocacy team provided an overview of the proposal as well as discussed a few areas for which EAA intends to provide comment via a webinar.



So I called Dan again. I was at my wits end. Smoke now coming out of the panel, every part of the continuity path check (or so I thought) and no change in the condition. Then Dan mentioned the possibility of the engine ground being loose. The engine is mounted with rubber grommets between the engine and motor mount which requires a grounding strap to get the engine connected to the airframe. In fact he even mentioned that if there was not a good ground when you push the starter button, the electricity gods will try to find a path to ground – anyway they can. So maybe the electricity was flowing back to the panel area through the mixture or throttle cables, heating up and causing smoke. Quick way to test: hook up jumper cables to the engine and the airframe and push the button. I did. The prop spun happily for the first time in days! Found it! Now to check that ground strap. I pulled the securing wire on the left bottom side cowl and it popped open. I immediately saw the ground strap dangling loose. It looked like the bolt securing the strap to the back of the head had come out. Of course that meant another trip to town to find a new bolt the right size and install it. By the time I had everything back in place it was pretty late – like 8:00pm. I started the engine, let it warm up and watched all the gauges. Everything was fine. I let it run about 10min, shut it down and then decided to just restart it "hot" to make sure. I hit the starter switch and the starter went "wheeeeeeeeee" spinning like crazy but not engaging the flywheel. What the heck now?! It was too late and too dark to mess with it so I went back to my trailer to get night's sleep.



Loose ground strap very visible after removing cowl. Bolt completely gone.



The ground strap in Waco TX clearly attached about two weeks earlier.

Bright and early the next morning I went out to the airplane again. I pulled that damn cowl off for the 3rd time or so. I glanced at the starter and discovered that of the two bolts holding it on the engine one of them had cracked off the front aluminum bracket. The bracket was broken. Whether it had been previously cracked and the trauma of removing and reinstalling did it in – or the starter guy had dropped it or somehow torqued it on his bench – I have no idea. But now I am stuck with a broken starter bracket in a little town in Michigan. So I took the starter off again. I went to the first auto parts store I found and asked them if anyone did aluminum (TIG) welding. They said they didn't know and that I should just get a new starter. I pointed out that it wasn't that easy. The front aluminum cast bracket had been customized with another tab welded on. I needed the existing bracket fixed. So they told me to see Wally. Wally had an auto repair place. It was 9:00am but they said it was too early to see Wally since he didn't start work until maybe 9:30am. Luckily Wally's place was .5 miles from my trailer so I went back and waited awhile and popped over to Wally's place about 9:30am. It was an auto repair shop

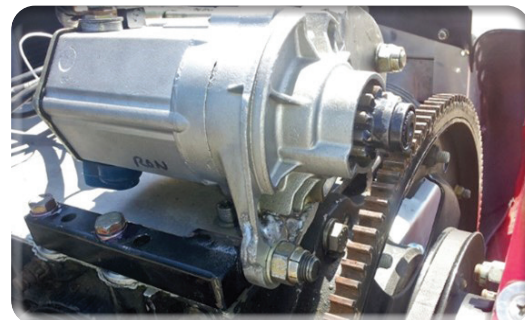
OCTOBER YOUNG EAGLES!



right out of 1952 and Wally looked a little like Goober from Andy Griffith. I showed Wally the starter and he shook his head and said, "I don't do that kind of welding but maybe Marty can help you." "Who is Marty?" I asked. "Oh Marty does TIG welding and is a general handyman. He gives me Marty's number. I call it and a girl answers and I ask for Marty. She hangs up. I call back and a women answers demanding why I am calling the cell phone of her 14 year old daughter. I apologize and hang up. I ask Wally for the number again. He corrects the area code and I try again and this time I get Marty. I tell Marty I am at Wally's and he said he would be there in a few minutes. When he shows up he looks at the starter and says, "Yep I should be able to fix that." So I follow his beat up old van about 20 miles into the countryside where we end up at a rundown farmhouse with lots of junk laying around. The barn is Wally's workshop littered with half-finished projects. The first sign of trouble was when Marty apologized for having to spend 20min installing a plug on his TIG welder. The second sign of trouble was when he began studying the instructions for the welder. "These things are very complicated", he says. So he clamps it on a workbench, I turn my head and the buzzing begins. A minute or so later I look at the result and am horrified by a completely botched weld job with the little broken part being completely melted in two and puddles of aluminum in the bolt hole. Marty tells me this was not going so well (really?) and he knew another place we could go. I follow him to another workshop in the country. My luck finally changed and it was clear these people were professionals. They had CNC machines, did all kinds of race car and boat welding as well as industrial robotic repair. They oozed competence. They look at the part and say they should be able to do it in a couple of days. "No!" I said. "Can you do it today?" and I gave them my sob story. They said maybe and I went back to the trailer and just paced around. About two hours later they called and I drove back out there. It was fixed and looked better than original. In fact the original part is a little weak with thin webbing. They had built up the area nicely, fixed all of Marty's booboos, and it looked solid. I took it to the plane, installed it, started the engine, restarted the engine and decided life was great again.



Broken mounting tab on cast aluminum bracket.



After welding and reinstalled.

I closed up the trailer, got my stuff, headed to the plane and took off for Chicago for about an hour flight. All went well and I landed back at Clow airport in Bolingbrook about 6:30pm. The last bit of a hassle was that I now had a rental car two hours away at South Haven Airport. My son shows up and we immediately drive to South Haven pick up the car and drive back to Chicago. By the time we did all that and had dinner it was nearly midnight. My plan was to fly to Waco the next day. I would have preferred a day of rest but the predicted enroute weather was too perfect. So I got up and took off at around 8:00am arriving in Waco (about 900 miles) at 4:00pm with three very fast fuel stops. Troubleshooting stuff like this reminds me of my past job as an engineer for a wire line service company in the oil field. There my job was to manage a computerized truck designed lower instrumentation into oil wells at the end of a 20,000' spool of cable. The equipment utilized electrical, acoustic, and radioactive measurements of the rock. We even did various explosive (perforating) activities. Actual electronic failures were rare. Almost all of the problems were caused by continuity problems. A pushed in pin on a connector, an electrically "leaking" (shorted) wire, or something stupid like that. Now I can add "grounded" to the list.....



Cleanex N694CS all alone on a rain swept tarmac at South Haven Regional Airport