

The FlyPaper

April 2023

The Official Newsletter for EAA Chapter 477, Charleston, South Carolina



Words From the President

Last month's trip to the National Museum of the Mighty Eighth Air Force was a good one. Only five of us were able to make the trip, so we went down to Pooler, Georgia into two vehicles. Once inside and looking at displays that covered the events leading up to World War II, a docent gathered us up, and along with several other visitors, took us inside a simulated Quonset hut. There we all received a target briefing, like what aircrews would've had back at English airbases in World War II. In John's trip report below, you can read about it and see what made it quite an enjoyable day.

My Ohio grandkids are in town for a few days and they helped me wash the pollen off the plane. They did a great job. Hopefully if the winds calm down, they'll get some flying in.

Hopefully this month's meeting will have the complete chapter staff present and we can talk about other chapter activities for 2023. On Saturday, May 20th, EAA will be promoting nationwide Eagle Flights. Eagle Flights are like Young Eagle flights, except that EAA members take adults up for an airplane ride instead of children. EAA asked that the adults that are given these rides are those that are interested in pursuing flying and have the means to earn their private pilot license. If you know any adult that is in the situation, let us know when and we could see what we could do.



Also on May 20th is a Fly-in and luncheon at Florence Airport that is being hosted by the Hartsville EAA Chapter 1058. Time is 11 AM to 2 PM and the RVSP is due May 2nd. The fried chicken meal (alternative is available) is \$12 per person, which includes sides, desert, and drinks.

Last Saturday, some of you may have heard about the tragic crash near Johns Island, where a pilot from Maine was trying to fly to Sun-N-Fun. It appears he may have been flying just under the low ceilings, and inadvertently flew into clouds, got disorientated, and crashed into a marsh near the Charleston Executive Airport. But on Monday, two days later, a pilot flying a Musketeer from Charleston Executive Airport, lost power on takeoff and made the "impossible turn" back to the runway. I'm not sure if the pilot made it back onto the runway, but the plane landed at the airport and was damaged (collapsed gear?). I'm not aware of any injuries to the pilot or any passengers. There are cases of pilots making the impossible turn and pulling it off. However, there are probably more cases of pilots, attempting to turn back and not making it. There is a lot written about that subject; it seems to come down to pilot experience, pilot skill, and pilot judgment. That's why it's always good to go over some of the "what ifs" before you taxi onto the runway for takeoff. We can talk a little bit about it at this month's meeting. Bring your thoughts and ideas on the subject. I hope to see you all there.

Stay safe, John



John Stoll
President EAA 477



Upcoming Events

EAA477 Chapter meeting

The April meeting, will be hel at 10:00 AM at the Walterboro airport conference room April 8th. Lunch will be served after the meeting around 12:00 noon.

South Carolina Breakfast Club:

Please use the following link to access the latest in scheduling:

<http://southcarolinabreakfastclub.com/2021-schedule>

Young Eagles Report

Liz Birch

Young Eagles Coordinator

Happy spring everyone. As stated on last month's newsletter, we will not be hosting a large public rally with vendors and displays this spring as we had originally hoped. Instead, we are going to join forces with the Hampton Country Chapter and try to fly a bunch of kids jointly. As of right now, we don't have exact dates coordinated yet, but the chapter website will be updates as soon as we get events organized.

If you have any availability to help out in April or the coming months, please reach out to me so that I know what kind of volunteer base we have so that I can invite the appropriate sided groups to attend these rallies.

Again, I do apologize for my lack of communication lately, I'm hoping that things are going to slow down now and I can focus a bit more of my time on the program and creating more opportunities to get kids involved in aviation.

Liz Birch
YE Coordinator
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Aviation Scholarship Program

Dow Sanderson

It has been quite this month, so nothing to report. Stay tuned for more activity in April.

Blue Skies,

Dow Sanderson,
Scholarship Chair

March Meeting Summary

Glen Phelps

Our normal in person meeting was replaced with a trip to the 8th Airforce muesum in Pooler GA. I was not able to make the meeting, but some of our members did. John Bradley took the trip and has provided a great trip report. You will find that report next in this newsletter.

TRIP REPORT – Mighty Eighth Air Force

John Braley

Instead of having our normal meeting on the second Saturday in March at KRBW, the chapter decided to take a trip down to the National Museum of the Mighty Eighth Air Force in Pooler, Georgia. John, Dow, Bruce, Ron, and I carpooled down to the museum from the FBO at Walterboro.



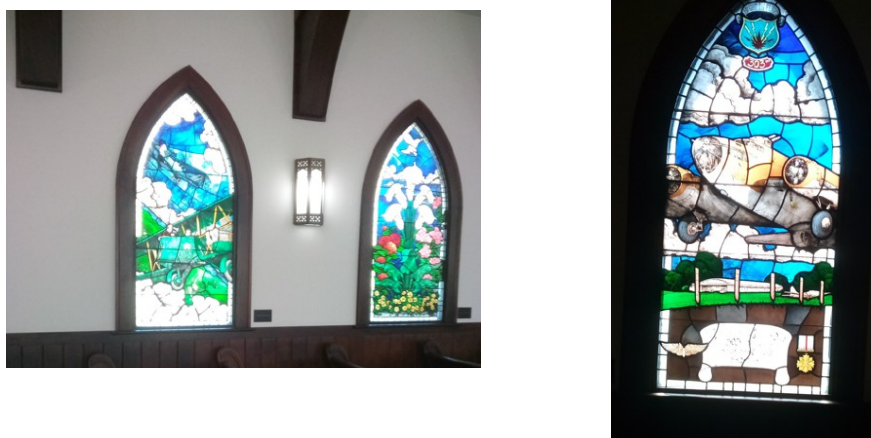
We arrived at the museum and began exploring. The first section of the museum provided a timeline and some history of World War II along with some artifacts of the war such as uniforms, medals, etc. After that, we watched a mini documentary about the Battle of Britain and continued on. As we were nearing the Mission Experience area, we were met by an older gentleman who volunteers at the museum and offered to give us a tour. He was a wealth of knowledge about the museum and the airplanes displayed there. After we watched 3 short films about the crews of the B-17 and the mechanics that worked on them, one thing that stood out to us was the temperature in the airplanes. When at altitude, the crew could expect subzero temperatures, and exposed skin was at risk of frostbite. Our tour guide led us into the large room where the B-17 was displayed. Also on display was a Stearman biplane, a B-24 cockpit which is in the process of being restored, and two almost to scale WWII fighter models.



Our tour guide informed us that the aircraft had never seen combat but instead was used to fight fires in California, and when the museum received it the B-17 was in serious disrepair. The team of volunteers at the museum restored the aircraft. Interestingly, this team fabricated the entire tail section. He told us that the original tail section is displayed in the Smithsonian. Another interesting fact he shared with us was that the B-17 displayed in the museum is the only B-17 with fully functioning turrets. Because of the functioning turrets, Steven Spileberg and Tom Hanks filmed part of a new mini series on the 8th Air Force (called *Masters of the Air*) that will be released later this year.



After the tour of the B-17, we toured the garden and the old English chapel replica. The garden included monuments to different squadrons. Regarding the chapel, a fascinating aspect was the airplane themed stained glass windows.



We could have easily spent another couple of hours thoroughly exploring each display, but everyone was hungry. On the way out, we noticed two static displays. One was a Vietnam Mig, and the other was a F4

phantom. The museum has plans of expanding and incorporating a box car that was used to transport POWs as well as more displays in the future.



After looking at the static displays, we decided on a nearby restaurant called Spanky's where we enjoyed good food and a great time of additional fellowship. In short, it was a great trip. We all had an enlightening experience learning more about the 8th Air Force and were humbled by the sacrifice and gallantry of the pilots and soldiers of World War II.

Aviation Safety and Upcoming Events

Ron Malec

FAAST Blast - FAA Safety Briefing News Updates

As a subscriber to the FAA Safety Team and the NASA Aviation Reporting System 'CALLBACK' Newsletters, I will share updates and information that I believe will be beneficial to all members.

General Information

Slowing and Stopping - By Jeb Burnside - Published: 21 Jan 2022 as printed in the Aviation Safety Magazine newsletter of 09 Feb 2023.

The typical personal airplane has busy brakes, which can make some landings more exciting than they need to be. It's best to slow down sooner rather than later... planning to come to a stop after landing begins well before touching down.

GOT RUNWAY?

In fact, planning to stop really begins with the choice of runway. In the case of the nighttime landing I just related, the runway was the longest available at my destination, and happened to be closely aligned with the wind. And I had planned to let it roll out full-length, anyway, knowing that the quickest route to the transient parking ramp was to hang a left at the end.

At another airport, I may have planned it differently, perhaps to get down, stopped and off the runway as quickly as possible. I may have aimed to clear the runway adjacent to the FBO I planned to use, or use the closest taxiway to my hangar. The point is that planning to come to a stop after landing starts before touchdown, by deciding where on the airport you want to end up, and perhaps how to minimize taxi time once landed. After all, it's usually easier on the airplane to fly than taxi.

Sometimes, you don't have much choice. My home-plate runway isn't the longest of its kind, so I generally plan to use all of it. It drains well, so it's unlikely there will be standing water, and I can use pretty much all the braking I want without worrying about hydroplaning (see the sidebar at the bottom of the opposite page). But it pays to be on-speed. And that's the next trick related to getting down and stopped: fly the recommended speeds. Every extra knot exponentially increases the energy your brakes must dissipate to stop, and the distance it takes.

Pump The Brakes, Or Apply Steady Pressure?

One question that comes up often is how to maximize braking and brake life, by pumping/pulsing the brakes or firmly applying steady pressure. In its discussion of hydroplaning (see below), the FAA's Airplane Flying Handbook has this to say:

Proper braking technique is essential. The brakes are applied firmly until reaching a point just short of a skid. At the first sign of a skid, release brake pressure and allow the wheels to spin up. Directional control is maintained as far as possible with the rudder.

TOUCHING DOWN

One important thing about being on-speed at touchdown is it's the only real way to obtain "book" landing performance. That couple of extra knots you carried over the fence isn't just going to magically disappear on your say-so. If there's a real desire on your part to get down and stopped in as little distance as possible, you need to pick

the right speed, generally 1.2 VSO, adjusted for weight, or as your POH/AFM recommends.

This isn't the time to use all your finesse; get it firmly on the ground, finished with flying, so there's less chance for the tires to skid or lock up when you stomp on the brakes. Then do absolutely nothing but manage the airplane's directional control, ensure the throttles are properly set and apply maximum braking. You don't need to risk any distractions by raising the flaps, and you especially don't want to risk retracting the landing gear, although doing so has been known to dramatically reduce landing distances.

Unless you're aiming for exiting the runway onto a bona fide high-speed taxiway, remain as close to the centerline as you can until slowed to taxi speed. Only then consider executing a 90-degree (or more) turn off the runway. Two reasons: Your brakes likely are going to be more effective when trying to stop in a straight, not curved line. You also can create unnecessary side loads on the landing-gear if making a sharp turn without slowing.

Hydroplaning

There are three basic types of hydroplaning, a condition in which the tire loses direct contact with the runway:

- **Dynamic Hydroplaning** - According to the FAA's Airplane Flying Handbook, dynamic hydroplaning is related to tire pressure. The formula is 8.6 times the square root of the tire's pressure in psi. A 40-psi tire would be susceptible to this kind of hydroplaning at slightly more than 54 knots.
- **Reverted Rubber Hydroplaning** - Reverted rubber hydroplaning occurs when the tire skids, partially liquefies and loses traction.
- **Viscous Hydroplaning** - Viscous hydroplaning relies on a thin film of water over a smooth surface, like a touchdown zone or runway striping.

WEIGHT AND DRAG

At the end of the day, the brakes on a typical personal airplane are pretty basic units, far behind the latest technology in the car you likely drove to the airport. They're of relatively small diameter, also, when compared to automotive and even motorcycle brake systems. There're only two tires, not four, and they typically lack any antilock or power-boost features. The point is, they need all the help they can get.

One way to help is with aerodynamic braking: Leave the wing flaps extended, as already discussed, and apply full nose-up input on the pitch control. By pitching the nose up, you've increased the amount of drag it generates, helping to slow you down. Even the typical nose-up elevator position creates some additional drag. Same with leaving the flaps deployed.

Pitching the nose up also places the maximum amount of weight on the main wheels, the ones with the brakes. That extra downforce can help prevent skidding the tires when maximum braking is applied. And let there be no mistake: If getting down and stopped as you want requires a maximum effort, you want maximum braking, as much weight on the wheels as possible and as much drag as you can generate.

Yes, there's an argument that leaving the wing flaps fully extended after touchdown of some high-wing Cessnas (cough, early 172s, cough) and applying full nose-up input on the yoke will increase lift to the point the airplane becomes airborne again. Maybe, but I'd suggest the only way that's possible is you were light and carried some extra knots into the flare, touching down above stall speed.

That said, dumping lift with spoilers is a time-honored procedure available to jet transport and sailplane pilots alike. If you absolutely, positively feel the need to retract the flaps after touchdown as a way of minimizing any tendency to rebound into the air or maximizing weight on the wheels, at least restrict using such a procedure to fixed-gear airplanes only.

Soft Fields Need Not Apply

Of course, a lot of this discussion goes out the window when we talk about soft fields. I'm thinking primarily turf/grass landing areas, but dirt and gravel also count. The bottom line is there's just not enough friction on these surfaces to use maximum braking.

What to do? Well, for starters, ensure the available runway is adequate to your needs. You get to be the judge on whether you can get down and stopped on wet grass, loose dirt or gravel. Having sat in the right seat as a Cessna slid off the end of a grass runway, I can attest to how easily it happens.

The other thing going on here, though, is that at really soft fields, you may not want to stop until in your parking spot. It can require a lot of power to get moving again. Sometimes it's best to keep moving, with the nosewheel as light as you can get it and judicious use, if any, of the brakes.

SLOW DECELERATION OR...?

On the other hand, you may not care a whit about the shortest stopping distance or making an early taxiway. You've got a mile of runway between you and your hangar and why waste the brakes? Should you let it roll like I did on that night landing described at the top of this article, or go ahead and use up some of the brake pads and get slowed down to taxi speed, turn off the runway and use a taxiway to get to your parking spot? It depends.

Generally, it's preferable to get slowed down as quickly and safely as possible—it's harder to maintain control when the airplane is decelerating through 40 knots than when it's already below 20. Yes, there are exceptions: One of them is when the one-turning, one-burning 777 filled with orphans is landing right behind you as soon as you make the high-speed, but that's about it.

The bottom line is that putting some effort into slowing down to taxi speed as soon as practicable goes a long way toward helping you maintain control, sometimes in poor conditions, and also minimizes any wear and tear to tires and wheels. You can exit the runway sooner, and brake pads are cheap.

Jeb Burnside is this magazine's editor-in-chief. He's an airline transport pilot who owns a Beechcraft Debonair, plus the expensive half of an Aeronca 7CCM Champ.

Airshow and Fly-in Schedule

• 2023 Airshows / Fly-ins

- 22-23 Apr-2023 – MCAS Beaufort Airshow (KNBC), Beaufort, SC
- 11-14 May 2023 – EAA Ford Tri-Motor, Eagle Aviation, Columbia Metropolitan Airport (KCAE), SC
- 13 May – 18th Annual Wings & Wheels Air Festival, Fairfield County Airport (KFDW), Winnsboro, SC
- 13-14 May-2023 – Augusta Airshow, Augusta Regional Airport (KAGS), Augusta, GA
- 18-24 Sep-2023 – 16th Annual Triple Tree Fly-in, Triple Tree Aerodrome (SC00), Woodruff, SC

Photos

- 05-Mar-2023 - SCBC at Mt. Pleasant Regional Airport – Faison Field (KLRO) –
(Sorry John, No pictures of the Grumman)





Until next month – Blue Skies - Stay Safe and Fly Safe

Treasurer's Report

Aimee Pereira

Beginning Balance for March:	\$5,080.62
Expenses	\$18.50 3/1 #1093 Glen Phelps – reimbursement of food expenses (not cleared bank as of 3/31) \$500.00 2/28 #1094 Craft – Abigail Weiland award
Deposits:	\$0.00 None for the month
Ending Balance for March:	\$4,562.12

Note: Total Earmarked for Young Eagles = \$200.00

Dues for 2023 will be \$35.00 and payments may be paid in person at a meeting or sent to the following address:

Aimee Pereira
107 Timberlake Ct
Summerville, SC 29485

If you are not sure if your dues are paid for 2022 or have any questions, I can be reached via email at: ea477.treasurer@gmail.com.