

# The FlyPaper July 2025

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



## Words From the President

Last month, I think we flew about 22 Young Eagles on International YE Day. I want to thank Liz and everyone else that helped her in accomplishing that event. The kids looked happy and we dodged most of the weather. The clouds kept coming and got lower and lower. Then we had some rain showers out there and the wind picked up. It was great to see Craig out there with his Cub. That's the first time I ever saw YEs being flown in a Cub. CJ did a great job in getting the passenger squared away and hand propping the plane for his dad. I forgot what was involved when taking people for a ride in my son's Cub. Our next YE flights will be in September.

I won't steal Bill and Dow's thunder, but Ziggy, our scholarship recipient and former Young Eagle soloed last week. Outstanding!!

I'm trying to get a speaker for the July meeting to talk about TFR intercept procedures. I talked to FAA FAST presenter Chris Peterson about doing a safety presentation for August. If you have any suggested topics for him, let me know.

Some of us attended the memorial service for former member Barbra Grigg, wife of member Jeff Grigg. Member Roger Medlin conducted the service and did a very nice job.

The last week of July, I was in Washington, DC for the 40<sup>th</sup> anniversary reunion (the one and only) of my FBI New Agent Class. While in DC, I did a quick tour of the National Air and Space Museum. See article later in the newsletter.

If my speaker falls through, I will talk about the FBI's current new agent training (only 2 out of 100 applicants become agents). Hope to see you at the meeting.

John



John Stoll  
President EAA 477



## Upcoming Events

### EAA477 Chapter meeting

The next chapter meeting will be held on July 12th at the Lowcountry Regional airport conference room. No Young Eagles this month.

### 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*

You gotta love this summer weather of scattered rain showers. June 14<sup>th</sup> was International Young Eagles Day. Of the 39 kids we had registered for the rally, we were able to fly 22 of the 24 that attended the event. I'm sure that several parents decided to not attend due to the weather forecast for scattered rain. This actually worked in our favor a tad as we did end up having to call it quits early do to the rain and low clouds. Huge shoutout to the volunteers that were able to come help, both on the ground and our pilots. Just a few days prior to the rally I went from 6 pilots down to 2. Thanks to some last minute help from a few more pilots, we were able to get back up to 5 pilots.

Here are a few photos from the rally



Our next set of rallies are scheduled for September 13<sup>th</sup> for a group of Boy Scouts before our monthly chapter meeting. Just a week later is our big fall rally that is open to the public on September 20<sup>th</sup>. I know these are back to back weekends, but please try to be available to help volunteer for one or hopefully both rallies. Let me know if you are free and which ones you can attend.

On another note regarding Young Eagle credits, I have spent \$195.19 of the \$440, leaving us a balance of \$244.81 available to spend. Due to two very generous donations, we now have 6 spare headsets and a new handheld radio. The credits that I spent were on new ear and mic covers for four of the headsets. If you know of anyone that is wanting to part ways with any child sized headsets, please let me know. We will want to keep brainstorming ideas over the next few months on how we would like to spend the remainder of our 2025 credits.

Liz Birch  
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## Aviation Scholarship Program

*Bill Grimes*

Happy to report that one of our Young Eagles participants Zhannah Jacobs( Ziggy) has soloed on 6/26 and 6/27. This was accomplished with the generous help of the EAA chapter 477 scholarship! Appropriate that she soloed at Walterboro! The chapter should be proud that its support for junior aviation is showing dividends.



Since her initial solo flights, Ziggy has continued to work on the requirements for the FAA private pilot certificate. This past week she accomplished the required solo three takeoffs and landings at a class D airport - Hilton Head. Upcoming plans are to accomplish the required night cross country flight and 10 night takeoffs and landings. She is also actively preparing to take the written exam. Time wise she has approximately 14 hours of dual and 2.5 of solo and is progressing very well.

We are hoping to take care of the long cross country prior to her starting her senior year at B.S. Stall High School. The long term objective is taking her Private Pilot check ride this fall. This will be depending on funds remaining in the scholarship. She has also been working on the initial steps for an application for the Air Force Academy. Hats off Ziggy for the effort and work she has been putting into her flight learning, a real joy to work with her.

Bill Grimes  
EAA477 Vice President

## ***Aviation Scholarship Program***

### ***Dow Sanderson***

I am happy to inform you that our former Chapter 477 Scholar John Bradley Richard's passed his multi engine check ride. John has been diligently working in developing his aviation training and this is a terrific milestone!

Please use this link to learn more about John's experience from a Young Eagle at the age of 13 to this accomplishment: <http://www.eaa477.org/scholarships.html>



Dow Sanderson  
Scholarship Coordinator

## ***June Meeting Summary***

### ***Glen Phelps***

There is not much to the report for the June meeting since it was a Young Eagle event which has been well covered by Liz Birch. There were other things that were reported and are included in this newsletter.

## *Trip Report of National Air and Space Museum*

*John Stoll*

As I mentioned above, I spent a few days in Washington, DC for my FBI New Agents Class 40<sup>th</sup> reunion. I arrived via airline on Monday at Reagan Airport and after checking in at the hotel in Alexandria, I took the subway into DC. [I toyed with the idea of flying my Cheetah up there to the Stafford Regional Airport, renting a car and driving to DC. When I considered the car and hotel parking costs, it was cheaper to fly].

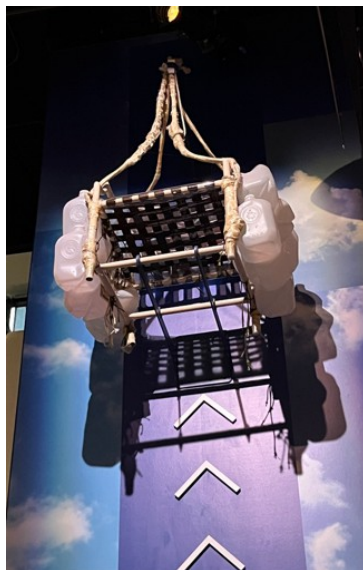
When I arrived soaked in sweat at the National Air and Space Museum (NASM), I found the museum was still under renovation and the only way to get in was by reservation. The Monday and Tuesday reservations were full, so I get on the list for 3 PM on Wednesday. The museum closes at 5:30 PM. Our class was getting a tour of the FBI Museum at FBI Headquarters on Wednesday morning and we were supposed to be finished after 1:30 PM. On Tuesday, our class was getting a tour and briefing of the FBI Academy at Quantico.

On Wednesday, I got to the NASM about 2:40 and got in line, in the blazing hot 98\* sun. Once inside, I found out that only half the museum was open. In the end, that worked out, as I only had 2.5 hours to see the museum. They had partitions blocking half the museum on each of the two floors. I peeked between the partitions and could see they are almost finished with those sections. I believe it is to be fully open this summer. They redid most of the sections from the last time I was there, about 20 years ago. The open sections covered early aviation from da Vinci's time until 1914; then the start of rockets from Chinese rockets to the 1930s; the airline exhibit remained unchanged from twenty years ago; there was an exhibit on man's quest for speed - land and air, with race cars and race planes; another exhibit dealt with communication - land and space, with displays from early telegraphs to undersea comm cables to satellites; and a seemingly larger section on general aviation. The GA section looked dated but included an area dedicated to homebuilt aircraft.

There were many more hands-on activities for adults and kids than in the past, and the entire cafeteria in the basement is completely redone. The space, WWI and WWII areas are supposed to have new exhibits when they reopen. If anyone is planning on going to visit this summer, check ahead of time to see if reservations are still required and if the full museum is open. As far as I know, their big museum at Dulles International Airport, the Steven F. Udvar-Hazy Center, is still open.

Here are a few photos I took while at the museum.

Larry's Lawn Chair



### A Pilot and His Lawn Chair

Forty-two helium-filled weather balloons lifted Larry Walters in this aluminum lawn chair from San Pedro, California, on July 2, 1982.

Walters reached 16,000 feet (4,880 meters), drifting into the controlled airspace surrounding Los Angeles International Airport. Commercial pilots reported sighting him to the tower.

Facing freezing temperatures and lower oxygen levels, Walters popped balloons with a BB gun to establish a controlled descent. The Federal Aviation Administration charged him with violating controlled airspace, flying without a balloon license, and operating a non-airworthy craft.

Gift of Larry Walters



Photos showing the discussion concerning homebuilt aircraft

Star Wars Exhibit



## **Aviation Safety and Upcoming Events**

*Ron Malec*

*Aviation Safety News and Updates – July 2025*

*As a subscriber to the FAA Safety Team, Aviation Safety Magazine, and the NASA Aviation Reporting System ‘CALLBACK’ Newsletters, I will share Information and Updates that I believe will be beneficial to all members.*

### **GENERAL INFORMATION**

**Short Final: ‘It’s All A Matter Of Perspective’ - Survival of the smartest.** - Mark Phelps, AVWEB, 24 June 2025

A [Piper J-3 Cub pilot was] asked if he’d ever heard of anyone jumping from an airplane without a parachute and surviving. He answered, “Sure. I do that on every flight. I land, taxi to my parking place, shut down, and jump right out.”

**Carbon Monoxide (CO) Hazards and Mitigations in Aircraft Exhaust Systems** - #FlySafe GA Safety Enhancement Topic - FAA Safety Briefing Magazine – 19 September 2024

Imagine a beautiful day for flying: clear skies and a clear forecast. You completed an uneventful engine runup and take-off and were just starting to appreciate the joys of flying, when a voice in your head starts saying something is wrong. Or in this case, it’s a voice in the cockpit. Your carbon monoxide (CO) detector sounds off that there is a potentially dangerous concentration of this colorless, odorless gas accumulating in the cabin. Because of the alert, you find a landing zone and touch down safely, cutting short an otherwise perfect flight.

Do you have a CO detector installed in your aircraft, or carry one on board with you when you fly?

Do you thoroughly inspect your exhaust system every 100 hours?

Let's spend a little time discussing the source of this hazard, some common themes from both accidents and from successful landings, and what actions you can take to mitigate your own risk.

I'm sure you are aware of the dangers of carbon monoxide within an enclosed space, and it's also likely that you have a CO detector in your home to protect you. But do you also consider the hazards it poses while operating your aircraft? Carbon monoxide is a by-product of combustion, and as long as aircraft burn fuel to generate power, the risk that CO finds its way into the cabin must be considered.

When inhaled, CO is absorbed into the bloodstream and binds to the hemoglobin in red blood cells with an affinity several hundred times higher than oxygen. This means it effectively blocks the ability of our blood to carry oxygen to our cells, and even after moving to fresh air, it takes time to clear the CO from our system. A National Institute of Health report notes that pulse oximeters overestimate oxygen saturation in cases of CO poisoning. If you are using supplemental oxygen because of suspected carbon monoxide exposure, do not rely on a pulse oximeter to indicate that your oxygen levels are in the safe zone. At high enough concentrations, CO exposure alone results in death; however, in an aircraft it becomes hazardous at concentrations below the lethal level. Similar to hypoxia, early CO exposure symptoms can include: headaches, drowsiness, nausea, or shortness of breath. Continued exposure leads to impaired judgement, which can lead to a loss of control of the aircraft.

Since 2010, there have been 12 fatal aircraft accidents where CO impairment was the primary root cause. A common element identified by the accident investigations in the majority of the cases was pre-existing damage to the exhaust system.

In a properly designed and functioning exhaust system, the exhaust gases are segregated from the airflow entering the cabin; however, over time, degradation can allow mixing of exhaust gases into the cabin air. Accident and Service Difficulty Reports (SDRs) show the most common causes of CO contamination are exhaust system cracks around the muffler and heat exchangers. Spot welds in these areas can fail, creating holes in the ducting. Corrosion and oxidation reduce material wall thickness causing cracking or pin holes. Dissimilar materials can also crack due to differing rates of expansion or corrosion.

Often the exhaust muffler area is covered by a shroud, and the complexity of the system makes a visual inspection of the interior area difficult. In the photos below the shroud has been removed, and a crack is visible in the muffler. In this case, exhaust would be able to enter the cabin through the heater system, but with the shroud on, this crack might remain hidden.

In several accidents where CO impairment was causal, there was evidence that previous inspections and maintenance failed to identify and repair an existing exhaust system fault. Using remote visual inspection aids such as a mirror with a ball joint, magnifiers, or using a borescope can help to inspect these areas. Removal of the shroud also aids visual access.

Of these 12 fatal accidents, accident investigators were able to make a positive determination of a CO detector in only two instances, and both were passive, spot-type detectors. While passive, color changing spot detectors are low cost, to be effective as an alerting mechanism, they require the pilot to incorporate a regular scan to check if the detector is changing color. Additionally, the eyes are very sensitive to a lack of oxygen, and loss of color vision is another possible symptom while suffering from CO exposure. The likelihood of noticing that a spot detector is indicating CO exposure is reduced if the crew is already impaired.

In contrast to these fatal accidents, since 2010 there were 81 reports from pilot crews who communicated to air traffic control that they had an emergency relating to CO in the cabin but were able to land successfully. In 76 of these instances, the report indicated the crew was reacting to a CO detector alert. Usage of an alerting type of CO detector is a major difference between the fatal accidents and incidents where the pilot was exposed to carbon monoxide but was able to make a safe landing.

In the event of a CO leak into the cabin, pilots need to be aware of the situation prior to their performance being compromised. The gold standard is a CO detector manufactured under [Technical Standard Order \(TSO\) C48a](#), which ensures that the manufacturer of the device built it to a minimum performance standard and followed quality controls. The FAA has also approved several CO detectors under the Non-Required Safety Enhancing Equipment (NORSEE) policy. Detectors approved under this policy may be installed as a minor alteration. Detectors that can be set to alert at 35 parts per million (ppm) concentration can minimize nuisance alerts but still provide timely detection. Detectors built to a TSO are more expensive though, and there are also electrochemical style detectors made for household use that can be brought on as carry on equipment. Limited testing suggests that installing the detector on the instrument panel provides a high probability of being able to detect at least 50 ppm anywhere in the cabin, and it also ensures that if the detector has visual alerting, that it is within the scanning range of the pilot. There are also headset options that have CO detectors built in that provide aural alerting.

So what should you do to protect yourself and your passengers? For many models of aircraft, there are existing Airworthiness Directives (ADs) that have been issued to address exhaust system cracking. Research the applicable ADs for any aircraft you operate and maintain compliance with them. Aircraft manufacturers have made improvements to the design of their exhaust/heater systems, but because this area is exposed to a high temperature and corrosive environment, regular thorough inspection remains important to detecting degradation before it leads to a hazard. It is important that both you and your aviation maintenance technician (AMT) understand the hazards that cracks and other damage in this area pose and take efforts to detect and correct them. Finally, strongly consider utilizing an alerting type carbon monoxide detector when you fly. We urge pilots to adopt a safety mindset, be aware of the hazard of CO impairment, and take actions to mitigate that risk.

#### **Additional Resources**

- [“Carbon Monoxide: A Deadly Menace,” FAA Pilot Safety Brochure](#) (PDF download)
- [FAA Safety Team Online Course: Aircraft Exhaust Systems \(ALC-498\)](#)

#### **AIRSHOW and FLY-IN SCHEDULE**

##### **2025 Airshows / Fly-ins** ([Airshow / Fly-in Web Links](#))

- **06-07 Sep 2025** – Sky High Aerospace Expo and Fly-in, Laurinburg-Maxton Airport (KMEB), Maxton, NC – [Sky High Aerospace Expo and Fly-in](#)
- **22-28 Sep 2025** – Triple Tree Fly-in, Triple Tree Aerodrome (SC00), Woodruff, SC - [Triple Tree Fly-In - Triple Tree Aerodrome](#)
- **02-05 Oct 2025** – Carolina Virginia Antique Aircraft Foundation (CVAAF) Fall Fly-in, Woodward Field Airport (KCDN), Camden, SC

#### **PHOTOS**

- 1) **No Photos this month.**

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