# LAKE RIDGE

# PROP WASH

## Newsletter

*A MILE OF HIGHWAY WILL TAKE YOU A MILE,*
*A MILE OF RUNWAY WILL TAKE YOU ANYWHERE*

## May 2025

### Chapter NOTAM

EAA Chapter 879
Help boost chapter participation, please invite guests to our meetings. All are welcome to attend.

### Notes from the President

Thank you to Michael and Ed from Chapter 1114 for their presentation on Highlander aircraft—it's sure to be a highlight of our gathering. I've received many inquiries about Eagle and Young Eagle flight opportunities. Let's finalize our plans for the year and timeline. Currently, we're short on available airplanes and pilots, but we may be able to organize something by fall. I'll also have updates on future presentations. Looking forward to seeing you at the meeting!

| In this issue: | Next Meeting Agenda |
|---|---|
| ➔ Prepare for Summer Flying<br>➔ Girls Can Fly<br>➔ Pop Quiz<br>➔ Mark Your Calendar<br>➔ About Chapter 879 | ➔ ***Highlander presentation with Michael and Ed from Chapter 1114***<br><br>➔ Monthly EAA Chapter update<br>➔ Future Speakers<br>➔ Chapter Apparel Ideas |

# The Pivot to Summer Flying

By: Frank White

Define Summer - Those hot, muggy days when you break out into a full sweat just lifting your glass of iced tea to your lips. That's how summers feel in North Carolina, particularly in the Triangle Region (Durham, Raleigh, and points south and eastwards). You should know what I mean unless you were transplanted from way up north. I suspect that even Vermont can be hot in the summer months. But we all know how these hot southern summers are; after all, we are in a sub-tropical region of the earth.

By now, most of you probably know where I'm going with this, and if the words 'density altitude' haven't crossed your mind, then you are probably not a pilot. It's ironic that I'm saying this since I'm not a pilot - chuckles. Seriously though, I've learned enough about aviation to know that there are things pilots and passengers should consider when transitioning from cold or fair weather flying to downright hot weather flying. Perhaps the most important thing you can do is strap an air conditioner on the front of your Piper Cub. Since you'd never get it off the ground (that was a bad idea), the other thing to do is dispense with the preflight and all that stuff that helps keep you alive, jump right in, and take off. The sooner you feel that hot wind on your face, the better you'll feel; why should I take extra time to remove the pitot cover? Who needs airspeed data anyway? The most important thing about flying is staying cool, right?

When talking about summer flying, high-density altitude might be the first thing that comes to mind. Other factors are just as important when it comes to summer flying; a dirt dauber who built a nest in the static port of your airplane is concerning. Since I keep mentioning this density altitude thing, let me give my fellow non-pilots a detailed, highly technical explanation of what high-density altitude is. High-density altitude is when your airplane *behaves* as if it is flying at a higher altitude than its actual altitude. The higher the *density* altitude, the thinner the air. The thinner the air, the *less efficient* the

propeller becomes because there are fewer air molecules for it to 'grab' and generate thrust. The same happens to the engine. So, if you usually clear the trees at the end of runway 32 at Lake Ridge Aero Park (8NC8) at 50 feet above the tree tops, on a high-density altitude day, you may only get enough power to clear them at 20 feet. Now, if you're taking on a couple of extra passengers, you might not clear the tree tops, and that would make for a 'bad day.' Whew! With all this science and math we explored regarding density altitude, you're free to take an aspirin.

But since getting the wind on our faces and cooling our sweaty backs is more important than a proper preflight on this hot summer day, we completely missed that dauber's nest in the static port. We all know they put all those instruments and gauges on airplanes only to impress non-pilots by making cockpits look complicated. Without a reliable static port we'll just rotate the airplane when we feel like it and climb out on a wing-and-a-prayer. If we feel the aircraft stalling and dropping out of the sky... well, good luck!

Summer flying means that pilots should pay extra attention to the airplane. Heat can have an effect on tire pressure, fluid levels, fuel systems, and overall engine cooling. Since hot air expands, tires, after sitting on a hot tarmac, could spontaneously combust, and your plane could burn up -- just kidding. However, overpressurized tires due to hot air expansion could affect braking due to less contact with the ground or over-stress the tires, making them subject to a blow-out (most of the research regarding stress due to heat on tires comes from studies on automobile tires; however, I believe the studies apply to aircraft tires also). Nevertheless, according to FAA SAFO (Safety Alert for Operators) 09012 overinflation of a tire can cause uneven tread wear, reduced traction, and the tread to be more susceptible to cutting. It can also increase the stress on aircraft wheels. [1]


Just like air expands with heat, so too does fluids. While small variances in fluid levels due to heat generally won't be a problem, bear in mind that you should allow a little extra time for the engine to cool before checking fluid levels.

Aside from fuel expanding from heat, you may be wondering how summer heat could affect the fuel system. My advice to answer this question is to ask an AI system like ChatGPT or Gemini. Seriously, I get to learn these concepts from research and asking AI systems so that I can regurgitate the information for you. Anyhow, fuel can get so hot that it ultimately creates its own pressure in the lines. If that pressure overcomes the pressure of gravity or the fuel pump, then guess what? Yup. You guessed it, the engine won't get fuel, and we all know what happens to a fuel-starved engine. There are other ways heat could potentially create vapor locks in the fuel lines. Might this be a good time to brush up on summer flying?

1 https://www.faa.gov/sites/faa.gov/files/other_visit/aviation_industry/airline_operators/airline_safety/SAFO09012.pdf

While this list is far from exhaustive, I want to touch on cooling. There are two main aircraft systems that need to be cooled: 1) The Engine; and 2) The Pilot. Both systems are subject to quit if overheated to a certain point. The best way to ensure the engine is cooled properly is to check for obstructions blocking airflow. This includes vents, inlets, and cowl flaps. The other system is a bit more complicated and could lead to premature failure if not cooled properly. Ground operations are the times when this system should be monitored closely. Time-proven ways to cool the pilot are to open windows and doors - even while taxing to the runway. If the manufacturer strapped an air conditioner to your plane, turning it on is probably a good idea. However, without an air conditioner, double-check, prior to take-off, that all human systems have properly closed and latched their doors. Oh yeah! It might not be a good time to wear that new flight jacket that you love.


Finally, just as you'd plan your trip around bad weather, you should plan summer flying to avoid the highest density altitude during the hottest part of the day whenever possible. Plan your flights for early morning or later in the evening.

Summer flying is a great time to fly. With a little extra attention, it is just as safe, fun, and exciting as flying any time of year.

# Local Women Take Flight: Inspired by Girls Can Fly

By Steve Krog

Two years ago, Cameron Rucinski attended our Girls Can Fly event, and it ignited a passion that quickly took wing. By the end of her junior year, Cam was already flying two or three times a week in the venerable J-3 Cub. A dedicated and focused student, she received a Ray Aviation Scholarship, which undoubtedly fueled her progress. Shortly after returning to school for her senior year, Cam earned her private pilot certificate around Thanksgiving. Demonstrating the true spirit of a young aviator, she is also an active participant in our EAA Young Eagles program, sharing the joy of flight with others.

Before heading off to college, Cam enjoyed some advanced flight training with her instructor in a 7EC Champ, practicing stalls, spins, commercial maneuvers, and other unusual attitudes. She is currently finishing her freshman year at an aviation college and is on track to complete her instrument rating by the end of the semester.

Cameron's enthusiasm for flying proved contagious. Soon after she began her lessons, her twin sister, Madison, also decided to pursue a career in aviation. They both took to the skies with gusto, and one memorable Sunday morning, both Madi and Cam were flying solo in separate J-3 Cubs. Their mother, Jodi (EAA 1573694), watched as a unique moment in aviation history unfolded. It's likely that nowhere else in the world at that moment were twin sisters simultaneously soloing Cubs!

Madison earned her private pilot certificate before starting college and is now nearing the end of her first year at an aviation college as well. While she wasn't assigned a flight instructor until late in her first semester, she is making excellent progress and is about two-thirds of the way to completing her instrument rating.

Another young woman whose aviation journey began at the same Girls Can Fly event as Cameron was Allison Simmons. Captivated by the possibility of flight, Allison completed her discovery flight within days and quickly began working towards her private pilot certificate. Balancing school, work, and other commitments, she successfully earned her certificate before heading to an aviation college. Recent communication indicates she is thriving and is expected to have her instrument rating by the end of the school year.

Emerson Swaney initially leaned towards a career in architecture. However, a change of heart occurred just two months later when she and her parents visited to inquire about learning to fly. It became clear that architecture was no longer her chosen path. Although Emerson hadn't attended a Girls Can Fly event herself, she sought advice from her friends Christina and Jaylin, and about a year ago, she embarked on her flight training. Working diligently at two, sometimes three jobs to finance her dream,

she still managed to fly three times a week. Remarkably, within days of earning her private pilot certificate, Emerson was on her way to a flight school in Florida. Recent news is that she has already earned both her instrument and commercial certificates in an impressive four to five months.

It's important to remember that not everyone who develops an interest in flying aims for an aviation career. Adelae Kewley (EAA 1613425) desired to learn to fly purely for the joy of it and to share flights with her pilot grandfather. Working full time throughout the summer, Adelae still prioritized flying several times a week. While scheduling an examiner proved challenging, delaying her checkride, she returned home for a weekend during her sophomore year of college to successfully earn her private pilot certificate. Now, Adelae and her grandfather can enjoy flying adventures together whenever time and weather allow.

A career in aviation may not be for everyone, but providing young women with exposure to its possibilities has undeniably opened doors and minds to opportunities they might never have considered otherwise. I am incredibly proud of each of these remarkable women, and I am confident they will all become successful, safe, and proficient pilots.

**By Steve Krog, EAA 173799**

# POP QUIZ


The term “angle of attack” is defined as the angle between the

a) *chord line of the wing and the relative wind*
b) *airplane longitudinal axis and that of the air striking the airfoil*
c) *airplane’s center line and the relative wind*

What *purpose does the taxiway location sign serve?*

a) *Provides general taxing direction to the named runway*
b) *Denotes entrance to runway from a taxiway*
c) *Identifies taxiway on which an aircraft is located*

*Risk management, as part of the aeronautical decision making (ADM) process, relies on which features to reduce the risk associated with each flight?*

a) *Application of stress management and risk element procedures*
b) *The mental process of analyzing all information in a particular situation and making a timely decision on what action to take*
c) *Situational awareness, problem recognition, and good judgement*

*Answers on page 8*

# LAKE RIDGE EAA CLASSIFIEDS

**Buy/Sell/Trade/Lend/Giveaway | Send your items/service announcement to classifieds@eaa879.com**

# CONTRIBUTE TO THIS NEWSLETTER


No one can make every meeting. That is why our chapter newsletter is essential. It provides an opportunity to engage members and non-members about stories we find entertaining or informative. It is said, "Pictures are worth a thousand words". Share the story behind that great picture on your phone or in your photo gallery.

Send your announcements and/or, story & picture(s) to newseditor@eaa879.org for inclusion in an upcoming Chapter 879 newsletter.

# MARK YOUR CALENDAR

**Submit events to newseditor@eaa879.org or** frank@ewhitecap.com

- **EAA1114 Breakfast Meeting at Cox Field, Saturday, June 15 · 8:00 – 10:30am, 1616 US-64, Apex, NC 27523, USA**
- **FlightSimExpo 2025 – June 27 – June 29,** More Info
- **EAA AirVenture Oshkosh - July 21 – July 27,** More Info

# POP QUIZ Answer


The term “angle of attack” is defined as the angle between the

***a) chord line of the wing and the relative wind***

What *purpose does the taxiway location sign serve?*

***c) Identifies taxiway on which an aircraft is located***

*Risk management, as part of the aeronautical decision making (ADM) process, relies on which features to reduce the risk associated with each flight?*

***c) Situational awareness, problem recognition, and good judgment.***

# *ABOUT EAA* CHAPTER 879

**EAA Chapter 879 organizes regular monthly meetings, breakfast and lunch events, and other aviation-related activities as opportunities arise. Chapter also provides support and resources to local pilots, offering workshops and training programs to enhance their skills and knowledge. Finally, the chapter provides a platform for anyone interested in aviation, including non-pilots, to connect with a vibrant aviation community, in and around Durham, NC.**

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|---|---|
| **EAA 879** | **Meetings:** Every 2nd Saturday 10:00 AM |

| **Location:** | **Chapter Officers:** |
|---|---|
| **Lake Ridge Aero Park - FBO Bldg**<br>**4340 E. Geer Street**<br>**Durham, NC 27704** | Sam "Spud" Pattellos<br>President@eaa879.org<br><br>Richard Netherby - Secretary<br>Secretary@eaa879.org<br><br>Gareth Hayes – Treasurer<br>Treasurer@eaa879.org<br><br>Randy Smith – Technical Counselor<br>randyjudy@mindspring.com<br><br>Stephen West – YE Coordinator<br>youngeaglecoordinator@eaa879.org<br><br>Frank White – Newsletter Editor<br>newslettereditor@eaa879.org |

EAA 879 mailing list: eaa-chapter-879@googlegroups.com or Click Here to Join