



# LAKE RIDGE PROP WASH

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

November 2023

## Chapter NOTAM

## Notes from the President

Chapter 879 Membership dues are due on, or before, December 31, 2023. See Carl Jensen to pay your 2024 dues. (*Cash, Check or Zelle*)

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<ul style="list-style-type: none"><li>➔ Tigressa Tales: Mayday</li><li>➔ Pop Quiz</li><li>➔ Experimental Planes: RV12 and the Sling LSA</li><li>➔ Lake Ridge EAA Classifieds</li><li>➔ Mark Your Calendar</li></ul>	<ul style="list-style-type: none"><li>➔ 10:00: Video/newcomer introductions</li><li>➔ 10:15: Presentation - <b>Taming the Taildragger with Larry Bartlett</b></li><li>➔ 10:45: Announcements / closing remarks</li><li>➔ 11:00: Fellowship</li></ul>

# TIGRESSA TALES: Mayday! Mayday!

By: Bill Watson

On July 23rd, 2015, after 594 hours flying Tigressa, I declared an emergency.

It was on the last leg of a triangular trip starting at Lake Ridge Aero Park in Durham, NC, Tigressa's home base. Tigressa first took us to Westchester County Airport (KHPN), where we stopped overnight to visit Alicia's mother in Queens. Traveling into the NYC metro area is always challenging due to the circuitous routing that's always amended and is always surprisingly low (<3,000') going into Westchester County.

Alicia, my co-pilot in life, stayed in New York while I flew off to Pittsburgh (KAGC) to visit my mother. Traveling out of Westchester is always less challenging because the initial clearance is comfortably high (>6,000') and usually amended to fly direct-to destination once away from NYC.

After several days in Pittsburgh, our initial clearance was the usual Allegheny Nine departure, then direct to Lake Ridge, a welcome relief from all the multipoint clearances. However, the last part of the flight would be in solid but benign Instrument Meteorological Conditions or IMC. After crossing over most of the Allegheny ridges, we entered the clouds, Tigressa happily flying with the steady hand of her autopilot, which had been engaged right after takeoff.



Ten minutes after entering the clouds, I noticed what can best be described as a disturbance in the force; the autopilot seemed somehow unsure of itself, at least in pitch. Then suddenly, the display urgently commanded a pitch down, and I could see my airspeed indications on the Electronic Flight Instrument System (EFIS) and the backup Airspeed Indicator (ASI) approaching stall speed! I disconnected the AP and instinctively disregarded the airspeed in favor of the artificial horizon display on the EFIS, and everything seemed almost normal again.



Everything in the previous paragraph is “to the best of my recollection.” There was a giant shot of adrenaline flowing through my system as soon as the autopilot began to act strangely. Without panicking, I focused intensely on everything. The sound of the slipstream and the engine seemed to predominate. I quickly scanned the panel, but the focus was on the EFIS display. Unavoidably, my eyes also tried to take in information from outside the windshield. Still, none was forthcoming, just a solid white IMC cloud. I naturally disregarded the airspeed indications because I rarely paid much attention to airspeed while en route. The urgent pitch-down indication on the AP display immediately put my

focus on the artificial horizon display of the EFIS, which never indicated such an upset; we were flying straight and level the whole time. The sound of the engine and the slipstream confirmed the straight and level indication. But what’s up with the airspeed indication?

Convinced we were straight and level, I took a look at the EFIS airspeed tape, and it indicated a near-stall airspeed. I had a backup mechanical ASI, and I may have glanced at it; I don’t remember referencing it. I also had an Attitude Directional Indicator (ADI). This hybrid backup instrument provided enough information to back up a real artificial horizon instrument. But I don’t recall referencing it either because I never really trusted it. I did believe my three EFIS displays. It would seem that I had converted from electro-mechanical instrumentation to the fully electronic systems driving my EFIS. This conversion manifests itself years later in modifications to my panel and backup systems, a subject perhaps for a later article.

Since I had been talking to the Roanoke Approach controller, I immediately declared an emergency using the words “MAYDAY” in the request to assure clarity. I told them I had instrumentation problems, was in IMC, and needed vectors to the closest airport. The direct route between Pittsburgh’s Allegheny County Airport and Lake Ridge passes directly over Lynchburg, VA (KLYH). Having passed over it numerous times, I had planned to never land there. Still, given its proximity, VMC ceilings, and recollections of the mountains around Roanoke’s approaches, it looked like Lynchburg would be it. I was given vectors and a descent to Lynchburg. My indicated airspeed was clearly false, but again, I rarely paid much attention to airspeed except for takeoffs and landings. I simply used my normal power

and pitch settings until I reached VMC conditions near the airport. Not unimportantly, everything sounded and felt normal. It helped that conditions were calm and non-turbulent.

After landing, I recall being asked to call Roanoke approach and confirm that everything was okay. It was, and the emergency was ended. No further actions or consequences were forthcoming. The question was now, “What do I do”? A check of the weather told me I had ample ceilings and adequate visibility to get home, VFR. I don’t necessarily need airspeed to get home, and maybe it would be working normally now. So I took off intending to return to KLYH, where there were shops and such. During takeoff, I noted that the airspeed indications were normal on my primary and backup instruments, so I flew home.



What had happened? Some sort of temporary blockage of Tigressa’s pitot was the best I could come up with. Over the next 2 weeks, I inspected both my static and pitot pressure systems, poked around a bit, and performed a test flight. Since everything was working satisfactorily, we stayed with our plan to take Alicia’s mother on her first small airplane ride from Lake Ridge to Pompano Beach, Florida. She was a good passenger and enjoyed herself thoroughly despite some spotty showers and bumpy conditions. However, this pilot was experiencing a curious and spurious anomaly; every time we passed through a shower, the airspeed indication would fluctuate and drop. Was moisture somehow getting into the system and disrupting the flow of air? Whatever was going on, it required that I disconnect the autopilot and hand fly for a bit. This occurred at least 2 times on our first leg to barbecue at Saint Simons Island, KSSI.

Of course, I kept things smooth and trouble-free for the sake of our novice passenger despite sporadic problems with the airspeed indications.

Since we had daytime VFR conditions for the flight, I was not concerned about completing the flight. Instead, with an extended period to ponder the situation, I thought I had figured out the problem. I was glad I hadn’t hastily tried to fix it after the Mayday call. Have you figured it out yet?

My first instinct after the Lynchburg incident was to disconnect the pressure connection on the instrument end and apply high-pressure air to the pitot. Later it occurred to me that if there was a blockage in the line running from the root to the tip rib bay, I might never get it out or isolate it because it was an opaque aluminum line. Instead, I blew the line out from the instrument side, and out came the



culprit: a desiccated insect carcass! Apparently, with a little moisture, the carcass expanded enough to block the tube.

When dried, the bug's body shrunk enough to provide accurate if lagging airspeed indications. In my old sailplane racing days, we would often insert a partial blockage or 'filter' into certain pressure lines to smooth out the response shown on our instruments. A carefully calibrated bug carcass of sorts, I guess.

Since then, I recommitted to consistently using a pitot cover when parked, just as I had earlier learned to consistently use cowl plugs after finding out just how quickly a bird can build a nest on top of an engine. Tigressa's owner relearned another classic lesson in aircraft maintenance.

Bill Watson is the author of the *Tigressa Tales* series and a monthly contributor to the Prop Wash. Other *Tigressa Tales* stories are available in [prior editions of our newsletters](#).

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## POP QUIZ

With respect to VFR flying the term 3-152 is a memory aid meaning what?

- a) 3 Cessna C152s
- b) 3 Statue Miles visibility, 1 mile below, 500 feet above, and 2 miles from clouds
- c) 3 Statue Miles visibility 1 mile above, 500 feet below, and 2 miles from clouds



# Constructing Dreams: The RV12 and Sling LSA Experimental Airplanes



The thought of experimental aircraft construction is alluring. Let's face it, many of us wouldn't be a part of this EAA Chapter if we didn't have an attraction to aircraft, including experimentals. Perhaps it's the promise of handcrafting a machine, understanding its every nuance, and then taking to the skies in it that entices some of us to build. We are in a rather advantageous position to consider building.

There are at least two members of our chapter that have built, or is building, an aircraft. Rich was kind enough to share his project with us a couple of months ago, and we get to fly vicariously with Bill Watson through his *Tigressa Tales* series. Many of you have spent most of your lives tinkering with airplanes. Finally, there's Joe, a brilliant engineer and machinist who has the machinery on hand to



Figure 1 Sling LSA

fabricate almost anything (I'm in no way, conscripting him or his machinery by this mention). Nevertheless, building an aircraft from a kit is perhaps the easiest and best way to go – unless we're a room full of engineers. Two standout models in this arena are the RV12 and the Sling LSA. As we dive into the journey of building these aircraft, we'll broadly explore the resources, time, commitment, and steps to achieving the prized airworthiness certificate.

## The Crafting Journey: Resources, Time, and Dedication

Building an aircraft like the RV12 or Sling LSA is as much a labor of love as a technical endeavor. Here's what we'll need to embark on this journey:

1. **Resources:** While kits for these aircraft provide the majority of necessary parts, they are an investment. Depending on the avionics and powerplant choices, costs can range significantly.
2. **Tools & Workspace:** Besides the kit, you'll need a collection of standard and specialized aviation tools. Equally essential is a dedicated workspace – a spacious garage or hangar is ideal.
3. **Time:** Depending on various factors, including the builder's experience and the aircraft's complexity, construction can take anywhere from 500 to 2,500 hours.
4. **Dedication & Commitment:** Regular engagement is essential. The project demands consistency, problem-solving skills, and, occasionally, seeking expert advice. Intermittent work can lead to challenges and delays.

As we wrap up our dive into the construction journey, the next logical step after building is ensuring the craft's sky-worthiness.

## Achieving Airworthiness

After pouring countless hours into building, the dream takes flight only after securing the airworthiness certificate.



*Figure 2 Van's RV12*

1. **Inspection:** The aircraft must undergo a comprehensive inspection by an authorized entity, ensuring it meets all safety standards.

2. **Documentation:** Essential to this process is the provision of a detailed construction log. Alongside, other pivotal documents include manuals, receipts, and parts records.
3. **Phase I Testing:** Upon meeting all prerequisites, the aircraft enters the Phase I testing period. Here, it's subjected to a specific number of flight hours to validate its safety and performance.
4. **Continuous Maintenance:** Even post-certification, there's an onus on the owner to ensure the aircraft remains in top shape. Regular inspections, usually annual, are mandated, and significant modifications might warrant additional evaluations.

Building an aircraft might be a great way to engage and challenge ourselves and grow our chapter. Whether it takes us a year or a score, all our Chapter (879) needs is willingness and commitment.

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## LAKE RIDGE EAA CLASSIFIEDS

Buy/Sell/Trade/Lend/Giveaway | Send your items/service announcement to [classifieds@eaa879.com](mailto:classifieds@eaa879.com)

**FOR SALE – New Desser Tires, 8.50-6, 4 Ply Tube Type** - I've got a couple of new tires for sale, Desser 8.50-6 4 ply tube type tires. These came with my Rans S-21 kit and now that it is time to mount tires and stand the fuselage up I've decided to go a different route on my tire choice. [see] <https://shop.desser.com/8.50x6-4-ply-aero-classic-smooth-tundra-tube-type/ecommm-product-detail/323336/>. They've been stored inside a climate controlled shop since receiving them last year. I do not have tubes for these, just the tires. Asking \$450 for the pair if you want to pick them up here in Cary. I can ship at your expense, 919-949-5851 if you have questions, drop me a call. Ron.

**FOR SALE -** •! b| x• ЖH \$75,000 – TT 1140, slider, IO-360A1A – 449 SMOH, Hartzell HC-C2YR-1BFP (no AD)/F7497(BA) 15 SOH, polished spinner, Slick mags, EI 4CHT/4EGT monitor. Icom A210, Icom A200, Narco AT-155, ADSB, Garmin 496, PS1000 ICS, Navaid AP-1. Pass brakes, electric flaps, Kroger shade, Andair Fuel Selector, upgraded tail fork/wheel, etc. Various extras/spares/manuals/cover, etc. Well maintained by A & P owner. Randy Difani 919-418-8387 [t6pilot@cfl.rr.com](mailto:t6pilot@cfl.rr.com) Cary, NC 2751



# CONTRIBUTE TO THIS NEWSLETTER

one of the reasons why our chapter opportunity to engage members and non-entertaining or informative. It is said, Share the story behind that great picture on picture(s) to [newseditor@eaa879.org](mailto:newseditor@eaa879.org) for inclusion in an upcoming Chapter 879 newsletter.



No one can make every meeting. That is newsletter is essential. It also provides an members about stories we find "Pictures are worth a thousand words". your phone or in your photo gallery. Send your announcements and/or, story &

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**Correction:** Last month I erroneously said that flight schools like the one at Lake Ridge Aero Park offers aircraft rentals to their students. I meant to say that flights schools near Lake Ridge Aero Park offers rentals to their students.

## MARK YOUR CALENDAR

- *November 18, - Regular Breakfast Meeting-Chapter 1114, 8:00am – 10:30am, 1616 US64 Apex, NC 27523 [More info](#)*
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## POP QUIZ Answer

The correct answer is **C** - 3 Statue Miles  
visibility 1 mile above, 500 feet below, and 2  
miles from clouds



# ABOUT EAA CHAPTER 879

a) EAA Chapter 879 organizes regular monthly meetings, breakfast and lunch events, and other aviation-related activities as opportunities arise. Chapter 3 Statue Miles visibility 1 mile above, 500 feet below, and 2 miles from clouds 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.

<b>EAA 879</b>	<b>Meetings:</b> Every 2nd Saturday 10:00 AM
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<b>Location:</b>	<b>Chapter Officers:</b>
<b>Lake Ridge Aero Park - FBO Bldg 4340 E. Geer Street Durham, NC 27704</b>	Ben Plowman, President <a href="mailto:President@eaa879.org">President@eaa879.org</a>  Carl Jenson – Treasurer <a href="mailto:cvj77@bellsouth.net">cvj77@bellsouth.net</a>  Randy Smith – Technical Counselor <a href="mailto:randyjudy@mindspring.com">randyjudy@mindspring.com</a>  Stephen West – YE Coordinator <a href="mailto:youngeaglecoordinator@eaa879.org">youngeaglecoordinator@eaa879.org</a>  Frank White – Newsletter Editor <a href="mailto:newslettereditor@eaa879.org">newslettereditor@eaa879.org</a>