Flying Club 1

Flying for Fun in Northern Virginia! www.flyingclub1.org

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The Privileged View

Steve Beste, President

The Ultimate Hangar Door. If we ever have to build our own hangar – and if we ever have an airfield to build it on – we'll need to solve the problem of the door. Being so large, hangar doors are often expensive and put a lot of stress on the hangar itself. Here's the steel door on my hangar at Front Royal. It weighs a ton, cost over $9,000, and requires that steel truss across the top to hold its weight.

Typical T-hangar electric bi-fold door

Mind you, it's lovely. I push a button and it goes up or down. It seals tight against birds, rain, dust, and windstorms. It's great! But it was also expensive, which shows up in my hangar rent.

Here's a better solution for people on a budget: the Ultimate Hangar Door. Adam and Justin Rodes built this one at their Bear River airport (VG54) south of Elkton, VA.

The manufacturer supplies the hardware, but you build the door itself from local materials. As you can see it's lightweight. This means:

- No heavy and expensive steel parts
- No shipping costs for large heavy steel parts
- Light loads on the hangar structure

- No need for electricity (see below)

Support tracks for the door

They raise and lower the door with a simple hand winch from a boat trailer.

Adam Rodes raising the door

This counterweight makes it easy.

As usual, insurance or airport rules may apply and queer the deal. The National Fire Protection Association's Rule 409, *Standard on Aircraft Hangars*, says that hangar doors for our size hangar must be made of non-combustible materials – metal. Your insurance carrier may insist on compliance, which would eliminate the Ultimate Door. Still, if we ever build our own hangar on a private airfield, this door may be our solution.

In any case, it's such a clever design that I wanted to tell you about it.

Fly safely,
Steve

This Month's Fly-In Destinations

To encourage all of us to get in the air more, the following is a list of fly-ins I found within (about) 100 NM of the Warrenton-Fauquier Airport which are occurring in the next month. Sources are: The EAA Calendar of Events, www.socialflight.com, funplacestofly.com and the Virginia Department of Aviation Calendar of Events.

Date	Event Description	Location	Distance
Sat, Nov 11 / 9AM-11AM	2nd Saturdays Pancake Fly-in / Drive-in	Williamsburg-Jamestown Airport (KJGG)	99 NM
Sat, Nov 11 / 9AM-1PM	Young Eagle Rally	Williamsburg-Jamestown Airport (KJGG)	99 NM
Sat, Nov 18 / 10AM-12:30PM	EAA Chapter 1563 Breakfast and Monthly Meeting	Gordonsville Municipal Airport (KGVE)	35 NM
Sat, Nov 18 / 10:30AM-12PM	EAA 1641 Monthly Gathering and FAA Wings Seminar	Bloomsburg Municipal Airport (N13)	154 NM
Sat, Nov 25 / 8-10AM	EAA Chapter 339 Pancake Breakfast	Chesapeake Regional Airport (KCPK)	138 NM
Sat, Dec 2 / 8AM	Tangier Island Holly Run. Breakfast with Santa 8-10 AM at W29 before briefing for the flight to TGI. Register	Bay Bridge Airport (W29)	71 NM
Sun, Dec 3 / 10AM-2PM	Open Hangar Party	Massey Aerodrome (MD1)	100 NM
Sat, Dec 16 / 10AM-12:30PM	EAA Chapter 1563 Breakfast and Monthly Meeting	Gordonsville Municipal Airport (KGVE)	35 NM
Sat, Dec 16 / 10:30AM-12PM	EAA 1641 Monthly Gathering and FAA Wings Seminar	Bloomsburg Municipal Airport (N13)	154 NM

Don't forget that there are several great local flying destinations with restaurants on or near the airport. Did I miss some? Let me know!

- Shannon Airport (KEZF) - On the field: Robin's Nest Cafe (closed Sundays), Walkable: Wawa, Perfect Pollo. Ultralights (with no N-number) not welcome on the field.
- Sky Bryce Airport (VG18) - Across the street at the ski slope: Copper Kettle (closed Mon/Tue)
- Cumberland Airport (KCBE) - On the field: Hummingbird Cafe (closed Mondays)
- Eastern West Virginia Regional Airport (KMRB) (towered) - On the field: Crosswinds Cafe

(closed Sundays)

- Hagerstown Regional Airport (KHGR) (towered) - On the field: The Grille at Runways
- Front Royal-Warren County Airport (KFRR) - 20 minute walk: 619 Market
- Williamsburg-Jamestown Airport (KJGG) - On the field: Charly's

New Restaurant!

I just found out about a new(ish) restaurant located at the St. Mary's Airport (2W6). I have yet to check it out, so if any of you go, let me know how it is! They are open Wednesday through Saturday 10AM-2PM. See their website: birddogbistro.com.

Also, check out the map created by our very own Club President, Steve Beste on the Flying Club 1 website!

From Our Members

***John Lewis** is planning an EPIC flying trip and is looking for other interested pilots to join him. He writes:*

I am interested in putting a trip together to Key West in the Spring (ish). We can start planning now if other pilots are interested. Here are some parameters of the trip:

1. KOLB III Classic, 100 hp 4 stroke Rotax, 2 seats. I would not mind taking a passenger.
2. Cruise speed 50-85 mph (best cruise is about 70 ish)
3. Range = 25 gallons at $\tilde{5}$ gph or about $\tilde{5}$ hours. Of course, less is good as well, but I can do 4 hours easily with reserve.
4. Route and number of days down, time in Key West and back is open for me. I do not want to be rushed, but I do not want to take a month either. We can bake this issue into the planning. Weather being a LARGE variable.
5. Actual dates are negotiable as well. Could be summer or whenever.
6. I MAY be able to get rooms on the Navy base cheap, but number interested needs to be known first.

These are the biggest planning factors for someone to join this expedition.

I have my own 800 ft runway at my farm in Essex, so anyone wanting to fly down and plan is doable as well; I can put people up.

Lastly, I just completed my hangar (see pic) if anyone is thinking of building one and wants some insight.

Interested? Contact John at john.w.lewis2@gmail.com

Sounds like a blast John!

Quiz

We stumped you again! No one was able to identify Burner (VG55) in Woodstock, VA.

This month's quiz picture was submitted by Steve Beste. He asks: "Name these two local paved airports that are now closed. They're still on the charts, however, and still landable in an emergency. Pictures were taken October 28, 2023."

Know the answer or have a picture for the guessing game? Email me at ooi.lucy@gmail.com.

OBX PPG Camping 2023

By Mark Barron

Eight PPG pilots (including four Flying Club 1 members) went to OBX and camped at the Oregon Inlet Campground for four days. One of those days was flyable. The rest were spent enjoying each other's company and meeting each other's families.


RUFFLES
CHEDDAR


FIRST FLIGHT


OBX 2023

Mark Barron and wife Margi, CK Chong and wife Ran, Steve Cypher and wife Vangie, Bob Eaheart.

Avoiding Fuel Contamination

By Harry C. Zeisolft and Henry M. Ogrodzinski

The following article is a classic from the November 1984 EAA Sport Aviation magazine and is provided here courtesy of EAA.

Fuel contamination has always been a major concern of pilots. If you take the time and effort to avoid fuel contamination, you will probably live to tell the grandkids about the "good old days of aviation". Cavalierly ignore that stuff in your fuel tanks and chances are that you will wind up a one paragraph accident statistic in a half dozen aviation magazines.

If the fuel truck is grimy, dirty and rusty, what is the condition of its contents? Although the truck is marked aviation fuel the type or grade of fuel is not indicated. Note the rusty disintegrating cylinder on the back bumper. That's a fire extinguisher!

The subject of fuel contamination has received more attention lately. Some of this concern is a result of the thousands of U.S. aircraft owners who are switching to auto fuel. However, reports indicate that pilots using mogas are the least likely to be affected by fuel contamination problems. Nevertheless, fuel contamination **is possible** in **any** aircraft using **any** fuel. Whether it is 100LL purchased from an FBO or mogas transported in a 5 gallon can we need to be prudent in examining its quality. As Pilot in Command it is **your** responsibility to ensure that your aircraft has been fueled with the proper fuel and that it is free from contamination.

What Is Fuel Contamination?

Fuel is contaminated when it contains any material that was not provided under the fuel specification. In other words, if it's not gasoline it doesn't belong in your fuel tanks. Contamination can be water, rust, sand, dust, microbial growth, or certain additives that are not compatible with the fuel, fuel system materials and engine. These contaminating additives include alcohol. Another form of contamination can result from topping the tanks off with the wrong fuel. we are all familiar with the horror stories involving line men who inadvertently fuel aircraft equipped with piston engines with jet fuel. Once again, as Pilot in Command it is your responsibility to ensure that your aircraft is properly fueled.

Water Is The Most Usual Fuel Contaminant

Water can get into your fuel in a variety of ways. All aviation fuels absorb moisture from the air and contain water in both suspended particle and liquid form. Water may find its way into an FBO's underground fuel tank, through improper housekeeping methods or through condensation.

At dealers with low turnover rate, water sometimes condenses in the partially-filled underground fuel tanks as it does in your aircraft.

Storing the aircraft with partially-filled fuel tanks encourages condensation and water contamination of the fuel. The next time you perform an early morning pre-flight inspection of your aircraft notice the dew or moisture on the wings, cowling and windshield. This same type of moisture can form on the inside walls of your partially-filled fuel tanks. Filling your tanks at the end of the flight and before parking or storing the aircraft will tend to minimize the problem. The fuel system sumps and screens must be drained prior to flight to ensure that any water that may have entered the system through condensation or fuel cap seal leaks is removed.

Checking For Fuel Contamination

FAA's pamphlet "Safety Guide for Private Aircraft Owners" (FAA Document FAA-P-8740-4A) concisely outlines the steps necessary to check for fuel contamination. According to the pamphlet, "The importance of proper servicing of the fuel system during preflight inspection cannot be overemphasized. Drain a generous sample of fuel (several ounces or more – not just a trickle) into a transparent container. Examine the sample of fuel from each sump for water, dirt, sand, rust, etc. Water will not mix with gasoline and, if present, will collect at the bottom of the transparent container and will be easily detected. If water or other contaminants appear, continue to drain the fuel from that sump until you are sure that the system is clear.

"If your aircraft is not equipped with wing tank "quick-drain" valves, the shop where your inspection and maintenance are performed can advice you about such installations. It is also wise to periodically inspect and clean the fuel tank outlet finger strainer; inspect and clean the carburetor inlet screen; and flush the carburetor bowl."

FAA has performed a series of field tests to determine how much fuel must be drained from the sump in order to ensure that water is not present. In one test 3 gallons of water were added to a half-full fuel tank of a popular high-wing monoplane. After several minutes, the fuel strainer (gascolator) was checked for water. It was necessary to drain **10 liquid ounces** of fuel before any water appeared. This is considerably more than most pilots drain when checking fuel for water contamination. In another test, simulating a tricycle-geared model, one gallon of water was added to a half-full fuel tank. It was necessary to drain more than a **quart** of fuel before any water appeared. In both of these tests, about 9 ounces of water remained in the fuel tanks after the belly drain and the fuel strainer (gascolator) had ceased to show any trace of water. This residual water could only be removed by draining the tank sumps.

The fuel sample, in your transparent container, should be visually free of undissolved water, sediment and suspended matter and should be clear and bright at the ambient temperature of 21° C (70° F) whichever is higher. This description applies to both avgas and mogas.

If you discover water in your fuel sample, continue to drain the sumps to remove the water. It is practically impossible to drain all water from the tanks through the fuel lines, so it becomes necessary to regularly drain the fuel sumps in order to remove all water from the system. It may be necessary to gently rock the wings of some aircraft while draining the sumps to completely drain all the water. On certain tail-wheel-type aircraft, raising the tail to level flight attitude may result in additional flow of water to the gascolator or main fuel strainer.

A Word About Alcohol

Yes, alcohol is a fuel contaminant. A concentration of 5% to 10% of alcohol can play havoc with your fuel system and engine materials. Alcohol, whether methanol or ethanol, can cause the deterioration of synthetic rubber seals and fittings. Deterioration of these parts can lead to the blockage of fuel filters and lines and a general degradation of the fuel system. There have been some reports of problems caused by alcohol-tainted fuel in gascolators. The cement bond between the rubber tip and the steel rod within the gascolator is deteriorated by fuel containing alcohol. As a result, the gascolator does not separate water from fuel as it should. Unchecked, the gascolator may suffer a total malfunction.

Users of mogas should be particularly careful of alcohol contamination. Some independent autogas dealers have intentionally added alcohol to their fuel tanks without notifying the buyer. That is one of the reasons that mogas users are encouraged to buy fuel only from high volume, reputable dealers of major refineries.

Alcohol contamination of fuel does not result from the use of FAA approved de-icing fluid, which contains less than 1% of alcohol.

If you suspect alcohol contamination there is one relatively rude check you can make on the fuel. In a transparent container mix 9 equal parts of fuel with 1 equal part of water. While a graduated beaker is helpful it is not necessary. You may, for instance, measure the parts with a cocktail jigger. If there is no alcohol in the fuel, the water will settle to the bottom of the container. It should be clearly identifiable as the same amount of water you added in the first place. If the water collects at some point above the bottom of the container, the liquid between the base of the water level and the bottom of the container is approximately proportional to the amount of alcohol in the fuel. If you discover alcohol in your fuel system you are advised to drain the entire system.

Out Of The Can, Into The Wing

Depending on your point of view, refueling your aircraft from 5 gallon cans or 55 gallon drums can either be a time-honored tradition or a hazardous enterprise. Generally, refueling your aircrafl from small containers is not recommended by the FAA or EAA. However, if you follow the proper procedures, refueling an airplane from containers can be just as safe and sure as refueling it from an underground tank... sometimes even better. It's better because you, personally, have complete control over the type of fuel you introduce into the fuel system and complete control (and responsibility for) of its purity. How often have you landed at a strange airport and taxied up to an FBO only to discover a fuel truck in a horrible state of disrepair. If a fuel truck is grimy and rusty, what are we to assume of its contents?

Necessity often results in mogas users refueling their aircraft from containers. EAA is currently aware of approximately 200 FBOs across the country which provide autofuel for their customers. Obviously, not all mogas users are within flying range of these FBOs. On the brighter side of the coin, it is equally obvious that more and more FBOs are beginning to stock autogas. They are reacting to the economic impact of about 11,000 aircraft now legally flying around the country on auto fuel and more every day. As more of us switch to auto fuel we can be sure that the FBOs will follow suit. Until that time, many of us will resort to lugging autogas in 5 gallon containers.

Refueling an aircraft from a container is no more hazardous than refueling a boat, lawnmower or snowmobile. The same precautions apply. Mogas users are urged to add a single step to their refueling practices. The EAA Aviation Foundation's Kermit Weeks Flight Research Center highly recommends filtering the auto fuel through a 100 mesh screen and a chamois as it is being introduced into the fuel system.If you purchase auto fuel produced to ASTM specification D-439, from a high volume, reputable dealership of a major refinery you should have no problem. However, the very act of transporting fuel from the service station to the airport may, in some way contaminate it. It will ease your mind and ensure contaminant-free fuel if you filter it before putting it in your airplane.

We have heard from some EAA members who have run into opposition from airport managers or FBOs when they attempt to refuel their own aircraft from containers. It is your **right** to refuel your own aircraft from a container. According to FAA Advisory Circular 150/5190-2A (4 April, 1972), "Any unreasonable restriction imposed on the owners and operators of aircraft regarding the servicing of their own aircraft and equipment may be considered a violation of agency policy. The owner of an aircraft should be permitted to fuel, wash, repair, paint and otherwise take care of his own aircraft, provided there is no attempt to perform such services for others. Restrictions which have the effect of diverting activity of this nature to a commercial enterprise amount to an exclusive right contrary to law."

One more point should be made about a contamination problem that has arisen in some older aircraft through the use of uncontaminated high-aromatic fuels. Some older airplanes utilize varnished cork floats in the fuel tank. High-aromatic fuels such as 100LL or mogas may attack the old varnish. The varnish can come loose and lodge in critical areas of the fuel system. If you are using 100LL or mogas in an older airplane, check the floats. You can avoid problems with cork floats by refinishing them with a modern urethane varnish.

There it is. Follow a few simple rules and you can avoid fuel contamination. Just don't tell the grandkids how easily it's done.

References: FAA Pamphlets FAA-P-8740-35A, FAA-P-8740-4A, FAA Advisory Circulars 20 - 43C and 150/5190-2A, FAA Great Lakes Region Pamphlet 8000-3.6(1-77) and ASTM Specification D-439.

Meeting Minutes

The October meeting was planned to be held in conjunction with the unveiling of the aircraft at the Culpeper Air Fest but was unfortunately canceled due to weather.

Service Providers

Recap our standing list of service providers:

- **PPG instructor and dealer:** Brian Goff, 703-963-7389

  spin2329@gmail.com

  https://www.paraflightnc.com/
- **Aircraft instructor - CFI:** Pete Bastien, 703-568-5778
- **Aircraft instructor - light sport and seaplane:** Chuck Tippett, 540-905-5091
- **Gyroplane Instructor:** Frank Noe, 443-253-7681

  frankcanfly@yahoo.com

  http://www.gyromojo.com/
- **Machinist:** Luther Taylor, 540-222-3927
- **Welder:** Luther Taylor, 540-222-3927
- **A&P mechanic/IA:** JD Ingram, 513-388-6312
- **Light Sport Condition Inspections, Rotax Certified:** Tim Loehrke, 703-618-4005
- **A&P mechanic specializing in tube & fabric, based at CJR:** Air Knocker Aviation

  (Abe Makely, Saverio Gambassi)

  571-309-7023

  airknockeraviation@gmail.com

For more information on instructors, see http://www.flyingclub1.org/instructors/instructors.php

Activities

Flying Club 1 Activities Schedule

Club meetings will be held on the second Saturday of every month at the Warrenton-Fauquier Airport (KHWY). Please see the schedule below for the location of other meetings and information on events. Changes in time or location will be posted in this newsletter and on the Club website.

Date	Activity	Location	Description
Saturday, November 11th, 11am	Fly-in, club meeting, and cookout	The terminal building at the Warrenton-Fauquier Airport	Club meeting, fly-in, and cookout
Saturday, December 9th, 12-3pm	Holiday Party	The terminal building at the Warrenton-Fauquier Airport	Monthly meeting and Holiday Party

Membership Dues Policy

The period of membership is the calendar year: January through December.

Renewals can be sent in starting in October for the upcoming year. Members who have not paid their dues by the end of February will be dropped effective March 1 and will not receive the newsletter or the membership roster.

Dues are $20 per year. But if more than one family member is active in the club, then a family membership covering both of them can be had for $25. Please:

- Make your check out to **Flying Club 1**
- Mail it to **Fabian Georges**

  P.O. Box 5322

  Springfield, VA 22150
- Include a copy of the membership application that's attached at the end of this newsletter (and is available on the club website). That's our way of keeping your contact information up to date.

MEMBERSHIP APPLICATION

New/Renewal: ☐ **New** ☐ **Renewal**

Type of membership: ☐ **Individual** ☐ **Family (when more than one member of the family is active in the club)**

Name(s): _____

Name To Go On Your Name Tag: _____

Street or PO Box:_____

City: _____ **State:** _____**Zip:** _____

Telephone, Home: _____ **Cell:** _____ **Work:** _____

Spouse's Name: _____

Emergency Contact: Name: _____ **Phone:** _____

E-mail Address: _____

Aircraft Liability Insurance through: _____

Aircraft make and model: _____ **N-Number (if any):** _____

Pilot rating(s): _____

Club Activities or Services for Which You Volunteer: _____

Information from this application will be included in the club's membership roster which is distributed only to members.

Instructions:

1. Fill out the above form.
2. Enclose a check made out to **"Flying Club 1".**
3. Send the form and check ($20 individual, $25 family) to:

Fabian Georges, Treasurer
P.O. Box #5322
Springfield, VA 22150

Flying Club 1 General Information

The Flying Club 1 is a nonprofit, recreational club dedicated to the sport of ultralight and light sport aircraft flying.

2023 CLUB OFFICERS AND DIRECTORS

President: Steve Beste 703-321-9110

Vice President: Allen Whatley 571-235-6978

Secretary: JJ Campbell 703-379-8930

Treasurer: Fabian Georges 714-661-8800

Director At Large: Pete Bastien 703-568-5778

Director At Large: Tim Loehrke 703-318-7896

Director At Large: Lucy Ooi 585-410-5573

2023 CLUB VOLUNTEER STAFF

Membership: Fabian Georges 714-661-8800

Club Artist: Jim Heidish 703-524-5265

Newsletter Editor: Lucy Ooi ("Wee")

Ooi.Lucy@gmail.com

Web Master: Steve Beste,

president@flyingclub1.org

A club is only as good as the members who volunteer to support its activities. The following listed activities with the club require member support in varying amounts. Please indicate on your membership application the function(s) (can be more than one) you will support as a Club member. All active Club members are expected to participate. However, members who live some distance away and cannot attend meetings regularly may prefer to support functions associated with Club weekend activities.

ANNUAL DUES (Jan 1-Dec 31) $20.00. Family membership (typically husband and wife): $25.00. A spouse who wishes to participate will please complete a membership application form.

CLUB WEB SITE: http://flyingclub1.org

MEETINGS are monthly, year-round. See the web site for dates and places.

THE NEWSLETTER: The newsletter is published by email on the first of every month.

SUBMITTING ITEMS FOR THE NEWSLETTER Members and non-members are encouraged to submit items for this newsletter. Send submissions to Lucy Ooi at Ooi.Lucy@gmail.com at least one week prior to the end of the month.

If you are interested in joining the U.S. Ultralight National Organization go to their website for membership information at: www.usua.org

Likewise, if you are interested in joining the U.S. Powered Paragliding Association, the National PPG Organization, go to their website for membership information at: www.usppa.org