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## Editor's Note

I wanted to apologize to the club for missing the publication of the October and November newsletter.

My travel schedule with work was extreme this fall and I was unable to get the newsletter research and published.

Next month, I hope to have a story on some safety techniques I learned of in Japan while watching train and bus operators in the various cities.

I've also had the chance to meet with European and American experts on Unmanned Aerial Systems and Urban Air Mobility. Sometimes these are confused and I would like to introduce the club to the concepts and differences between them.

I thank you all for your patience and



## Tangier Holly Run 2019

By: Edward Wright

Thanks to Joe Stubblefield for organizing our club's participation in the 51st annual Tangier Holly Run! If you haven't been, the "Oshkosh of the Chesapeake" is a great local fly in to meet other pilots from the area, check out some scenic bay views, experience a fascinating island community, and bring some holiday cheer and charity to the residents in need.

December 7 was a beautiful, clear day (Rudolph not required), and the club sortied three club aircraft out to the island: 9BA (Joe, Ed, and Ed's wife), 44N (Mladen and two guests), and 300 (Rado and Lee). We departed KGAI around 8am for Bay Bridge (W29), where we met up with other participants for a blueberry pancake breakfast and a safety briefing. Santa took off and went feet wet just after 10am in his RV-7 sleigh

with nearly 50 other reindeer tailing in a sloppy combat cruise. We landed at Tangier (TGI) with close interval and parked in tight thanks to the flight line elves.

On deck, we met former club member Owen and his son before dropping off presents and touring the island. The group split up so some could wander the island while others attended service at the historic Swaine Memorial Church, and then regrouped at Lorraine's for crab cakes and massive fish sandwiches.

The club even came to the rescue of a fellow pilot who blew a front tire on takeoff and went into the grass off RWY 02 (left). Joe and Ed conducted a FOD inspection of the runway in 9BA, but were unable to PID the dubious culprit (discarded crab shells). Mladen and Rados' crews stayed behind to help out and perform the



## Sources of fuel contamination

Particulates - despite the increasing use of protective coatings on the interior surfaces of fuel tanks and pipes predominantly made of steel or its alloys, the main source of particulate contamination is rust and scale.

Water - the accumulation of water is almost inevitable in stored aviation fuels even if it has a low water content at airport delivery because of a number of opportunities for moisture to be taken up.

Microbial growth - although aviation fuels are sterile when first produced, they inevitably become contaminated with micro-organisms that are omnipresent in both air and water. Micro-organisms found in fuels include bacteria and fungi.

## Detection and Removal of Contaminants

Three methods used sequentially to detect and remove any contaminants. Filtering through pleated paper/synthetic fibre screen removes particulates, passage through a filter/separator, water-absorbing media and a salt drier removes water and finally, clay treatment removes any surfactants left in the fuel.

## Tangier (con't)

traditional Festivus “feats of strength,” pushing the 172 2400ft back to the ramp where it could be repaired.

Why you should go if you've never been:

- **Convenience:** It's a great day trip, less than 120nm away. You can leave in the morning, have plenty of time to see the sights, and be back before dinner.
- **Tradition:** Participate in a fly in that [goes back to 1968](#). Bring some holiday cheer with holly branches, Santa, and donations for the local school.
- **Camaraderie:** This was my first club fly in, and it was great to fly and spend time with club members outside of the trailer and to meet other local pilots.
- **History:** The island was visited by Captain John Smith 1606 and settled by John Crockett in 1686. Ft. Albion served as a British staging base during the war of 1812. The island also stood against mainland Virginia by opposing slavery and secession from the Union during the Civil War. There's a great little museum that chronicles the island's history, and the town itself is a historic experience. Many locals even speak with a unique dialect.
- **It won't last:** the Army Corps of Engineers predicts the island may be uninhabitable as early as 2040. Check it out while you can...

If you're interested in next year, check out [http://www.tangierhollyrun.com/!](http://www.tangierhollyrun.com/)

## Airspace Guidance for Small UAS Operators

**Class B, C, D, and E Airspace is “controlled airspace”.**

This airspace can be found around airports with air traffic control towers, or those with instrument approach procedures. Authorization from Air Traffic Control is required to fly drones in most controlled airspace. Do not contact the local air traffic facility for authorization. Operators may apply for an authorization through an approved UAS Service Supplier using [LAANC](#) (or the [DroneZone web portal](#).) To determine if your operation is in controlled airspace, check the FAA's [UAS facility maps](#).

**Class G Airspace is “uncontrolled airspace”**

FAA Air Traffic Control authorization is not required to fly drones in this airspace. Uncontrolled airspace is typically found at low altitudes or in rural areas. Most U.S. airports are in uncontrolled airspace, so drone operators should maintain situational awareness to ensure they see and avoid other aircraft. Recreational Flyers must operate in accordance with the Exception for Recreational Flyers (Title 49 USC 44809). Use the B4UFLY app and check <http://faa.gov/uas> for additional information.

Section 44809 (recreational flyers) cannot fly above 400' and are not eligible for altitude waivers.

## Aviation Safety: Mis-fueling

ASRS's award winning publication CALLBACK is a monthly safety newsletter, which includes de-identified ASRS report excerpts with supporting commentary in a popular "lessons learned" format. In addition, CALLBACK may contain features on ASRS research studies and related aviation safety information. Editorial use and reproduction of CALLBACK articles is encouraged.

The excerpt in italics to the right is reprinted from NASA's ARSR database

*This aircraft is equipped with "AVGAS ONLY 100LL" placards.... I requested, "Top off the main tanks only." I then became...distracted with securing the aircraft for heavy weather.... When I finished,... I noticed the...fuel truck was labeled with the black placard, "JET-A." [The fueler] told me he had just added 29 gallons of JET-A to my aircraft, a twin Bonanza. It was apparent...that the fueler was...new to this position.... When I examined the fueling nozzle, there was no duckbill [fixture]. In place of the duckbill was a conventional round AvGas nozzle.... The fueler was unaware of the difference between the...designs. Further discussions...revealed he was unaware of the deadly consequences of this error. The fuel tanks were drained and flushed by the local A&P. Further research...with my A&P...revealed that the electric fuel pump...would hold...jet fuel even though the tank was drained of fuel.... This small but significant amount of [contamination] would be delivered to the engines. I then disconnected the fuel supply lines at the firewall and drained the fuel lines and crossfeed system prior to the next flight.*

Distractions during a preflight inspection can lead to inconveniences, or they could lead to disaster. How many times have you been conducting preflight and received questions from a curious passenger? How often do you ensure you complete the checklist (with the checklist in your hand) from start to finish without having to attend to some other duty (storing cowl plugs or the pitot tube cover; moving the ladder to reach to the fuel tanks; retrieving something from the baggage compartment)? Distractions like those can be a link in a chain of events that leads to something bigger than just losing your place in your checklist flow.

This month, a CFC pilot encountered a disruption in his preflight flow and didn't discover water contamination in the tanks until after engine start. Luck was on his and his instructor's side as the engine quit before they left the parking spot, but not until restarting two more times...and quitting two more times.

When starting the engine, primer is used to inject fuel directly from the line (not the lowest point in the line) into the cylinders. The engine will start and even run with that fuel, but not from the low sump collection point where water will collect. After the primer is exhausted, water enters the cylinder.

This month's ASRS report (at left) discusses a different type of fuel contamination and the distraction that lead to it. The incident pilot trusted the fueler to understand the differences between fuel types, which fuel is appropriate for a piston engine, and even the nozzle differences used to prevent mis-fueling. That trust was misplaced and, if not for his attention after the fact, could have resulted in the loss of the airplane.

The FAA (in the Pilot's Handbook of Aeronautical Knowledge) says that 3.5% or accidents occur in preflight/taxi operations, and 23.4% during takeoff. At least some portion of that 23.4% no doubt traces its roots to an action or error of omission in the preflight. It goes on to say "...risk is an unavoidable part of every flight... safety requires the use of appropriate and effective risk management not just in the preflight planning stage, but in all stages of the flight."



## And Finally...

If there are activities you would like to have added to the Upcoming Events Page, please let AI Secen know before the 25<sup>th</sup> of the month (publication date of the newsletter).

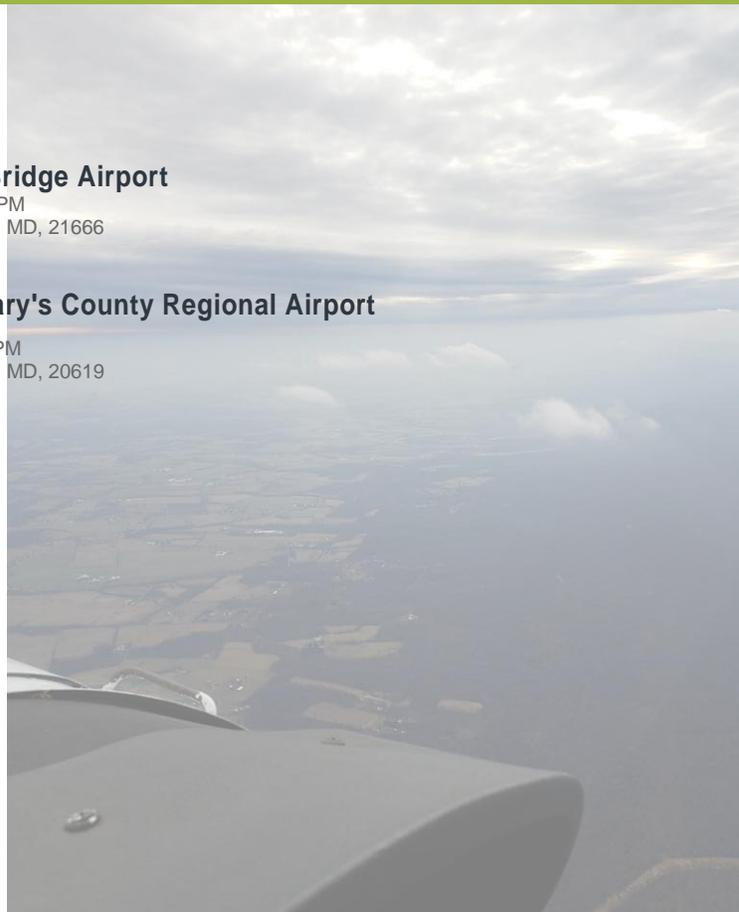
## Upcoming Events

- **Rusty Pilots at Bay Bridge Airport**

Jan 18, 2020 9:00 AM - 12:00 PM  
210 Airport Road, Stevensville, MD, 21666

- **Rusty Pilots at St. Mary's County Regional Airport**

Feb 8, 2020 9:00 AM – 12:00 PM  
44200 Airport Road, California, MD, 20619



## Congressional Flying Club

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