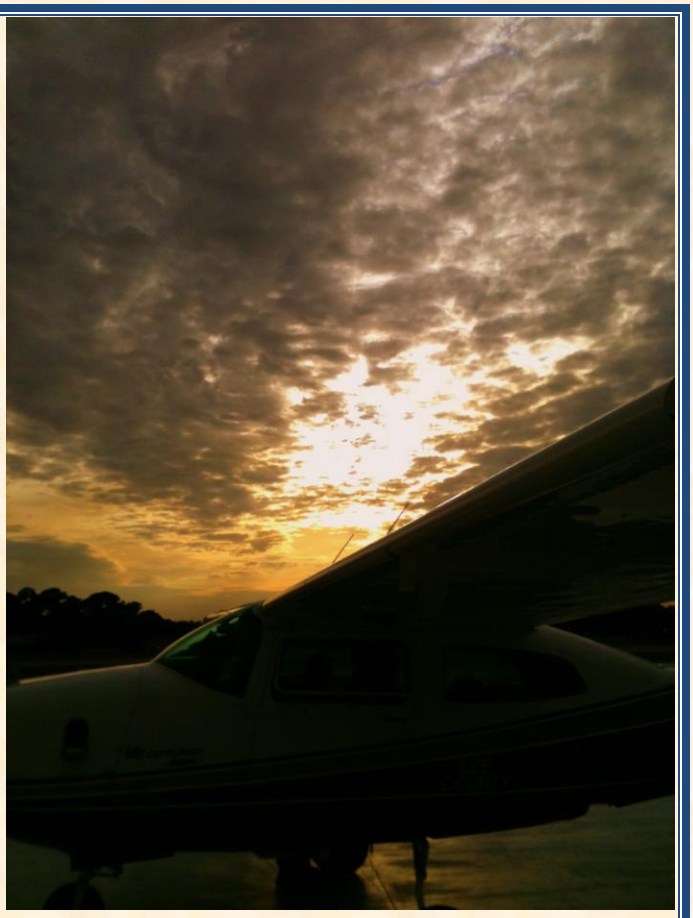
The Safety Wire

May 2013



GRADUATION seems to be everywhere around this time of year. My high school graduation seems like eons ago and despite the significance of it, I only remember a couple thoughts that occupied my young mind such as, "Will this sappy song ever end?" or "Was I supposed to wear pants under this gown?" This month, I sat in the crowd during recent graduations for family members and I noticed that the message has not changed. Graduating students are urged to "look to the future," or to "take the next step," and so on. However, I think if a magic mind-reader could be used to read the thoughts of the grads sitting there, you would hear the same thought that was going through my head so many years ago, "*Thank God* that is finally done! I'm outta here." The truth is, 'that' learning stuff is not really over, but to point it out on graduation day would earn one the official title of 'Party Pooper'.

Aviation is "terribly unforgiving of any carelessness, incapacity or neglect." Captain Lamplugh's statement holds true for our responsibility to continue our personal education in aviation long after the final flight exam we are required to take for our license. To learn everything possible that has value to our profession would take just a bit more than a lifetime. Whether you are the newest TFO in the unit, a mid-career maintenance technician or a salty 'experienced' flying cop with stacks of filled out logbooks on a shelf, there is always something new to learn. If you are reading this, it is safe to assume you agree. So the only question then is, where can we look for this knowledge? There is no way to include everything out there, but here are a few suggestions:

Airborne Law Enforcement Association - www.alea.org

As an ALEA member you have access to databases, research papers, presentations, training and more. On the homepage, look for the tab on the left side of the page that says *Research and Databases* (http://www.alea.org/resources). Need information that you can't find there? Use the discussion forums.

ALEA Regional Safety Seminars - http://www.alea.org/public/events

The only source dedicated to law enforcement aviation information is the collective knowledge of ALEA members. Tap into that vast source of information on safety, tactics, training and administration. ALEA regional seminars are FREE for ALEA members.

ALEA Annual Conference - http://www.alea.org/events/2013attendees

ALEA's Training Program Manager Don Roby has done an outstanding job in carrying on the tradition of providing high quality training to ALEA members. Having identified the need for additional training resources for our association's members, Don has added new classes this

year. In addition to the conference classes offered, there are several three-day pre-conference courses. One of the new offerings this year is an Aviation Safety Officer course. This course is designed for Safety Officers interested in creating modern, high-quality safety programs at their agency. http://www.alea.org/assets/cms/files/Conference/2013/p6%202013CONF%20-%20Pre-Conference%20Courses.pdf

International Helicopter Safety Team - www.ihst.org

You could spend days on this site and not get through all of the information there. On the homepage, you can select the part of the world you are flying in and even change the language. While it is geared towards the helicopter sector, much of the safety information is non-category specific. The SMS information and training fact sheets are especially useful.

Air Safety Foundation - https://www.aopa.org/asf

You do not need to be a paying member of AOPA to access the Air Safety Foundation's (ASF) great online training or go to their safety seminars. Create a free user account and start working on what appears to be an endless supply of training opportunities offered by the ASF.

FAA Wings Program http://www.faasafety.gov/WINGS/pub/learn_more.aspx

This is yet another source of free training information. Many of us have spent too long thinking, "I should really start on the Wings program," but put it off for one reason or another. There is no good reason not to start today. Some of the info is geared towards the private operator, but much of it is very useful for public safety operations.
Another FAA resource I recently came across is here: http://lessonslearned.faa.gov/

NTSB Accident Database http://www.ntsb.gov/aviationquery/index.aspx

You can either use the search engine or the monthly lists to look at accidents reported to the NTSB. Remember, it usually takes around 12 months for the NTSB to publish a Probable Cause Report. Until then, you will see either a Factual or Preliminary Report.

NASA Aviation Safety Reporting System http://asrs.arc.nasa.gov

When you are done looking through the reported accidents, go to NASA's Aviation Safety Reporting System. If you are not familiar with this system, you need to be. This is where you can report a 'near-oops' anonymously. The database is just as useful and interesting as the NTSB's, though often for different reasons. They also have a great, free newsletter: http://asrs.arc.nasa.gov/publications/callback/cb_400.html

"Flying is overcoming not the distance from here to Nantucket...

but the distance from here to perfection."

~Richard Bach

Regional Safety Liaison Program

I do not have all the answers, but WE do. This philosophy has been a driving force in the ALEA Safety Program over the last year. No matter where in the world ALEA members take to the sky to serve their communities, there are basic safety issues that impact us all. Still, we must recognize that there are also significant differences in how business is done in different parts of the world. These variances are driven by varying laws, equipment, weather, etc. It would be naive of me to think that I could somehow have the knowledge of all of these different and changing safety challenges around the world. To address that, ALEA has approved a Safety Liaison Program. These volunteers will help keep the safety program informed on safety issues in their area and help us address them. They will sometimes represent the safety program at events I am unable to attend, as well. The program will also serve as a means of tapping into the knowledge, experience and successes of law enforcement aviators around the globe. I expect that many of the solutions to challenges in one region will benefit members working in other parts of the world. I am always available to any ALEA member 24/7 via email or phone. If you are interested in contacting your regional Safety Liaison, here is the current list:

Brazil/S. America	- Alex Barreto (Sao Paulo Police)	mena@pilotopolicial.com.br
Europe	- Joseba Mendizabal (Basque Police Dept., Spain)	heligolf.01@gmail.com
Northeast US	- Glenn Daley (NYPD ret.)	heloflight@optonline.net
Southeast US	- Lee Majors (Leon County Sheriff's Office)	majorsl@leoncountyfl.gov
Central US	- Mark Colborn (Dallas Police Dept)	kd5elf@tx.rr.com
Western US	- Jordan Van Meter (California Highway Patrol)	JOVanMeter@chp.ca.gov
Eastern (Midwest) US	- George Nestorovich (Lake County Police)	gnestorovich@lakecountysheriff.com
Canada	- Ted Smith (Ontario Provincial Police)	Ted.Smith@ontario.ca

As you can see, this list has some great people on it and I want to express my gratitude for their offer to help. You can also see we are missing representatives from several areas of the world. This list is not limited to the six ALEA membership regions. I would still like to have people involved from Asia, Australia, Africa, Central America and others. If you are interested in being the safety voice for ALEA members in your area, please email or call me.

"Knowledge is the wing wherewith we fly to heaven."

~William Shakespeare

Dr's Visit...

"When reviewing the medical literature about neck and back problems in aircrews, two different camps seem to stand out regarding the cause. The first is a combination of extra weight on the head (helmet, NVG, counterweights), posture, and whole body vibration (WBV) from the aircraft. The second is a combination of the height (stature) of the crew member and WBV. While these possible causes differ, we need to remember prevention....which is simply stretching exercises. Focus on the core and neck muscles."

Contact Dr. Dudley Crosson at:
(772) 359-3680
dcrosson@delta-p.com

As a follow up to Dudley's comments, check out the link below for updated information on helmet safety:

http://www.fs.fed.us/fire/av_safety/promotion/accident_prevention_bulletins/IA%20APB%2013-02%20Helmets.pdf

Emergency Procedure of the Month

Open Door In Flight..

Consider the following case and, with your crew, review the emergency procedures for the aircraft you fly:

Robinson R-44
Injuries: 2 Fatal
ATSB Report# AO-2012-021v
http://www.atsb.gov.au/publications/investigation_reports/2012/aair/ao-2012-021.aspx

Soon after lifting off, the pilot's door opened and the pilot reached out to close the door. Simultaneously, the helicopter abruptly pitched nose-up then steeply nose-down, rolling to the right before the right landing gear skid and main rotor blades struck the ground. A fuel-fed fire started in the vicinity of the fuel tanks and lower mast area prior to the helicopter coming to a stop. Both occupants were fatally injured and the helicopter was destroyed.

The Australian Transport Safety Bureau (ATSB) found that the pilot's door was not properly latched prior to lift off and opened during the turn to depart. In attempting to shut the door the pilot probably let go of the cyclic control from the normal (right) control hand, allowing for an unintended, abrupt nose-up pitch and the helicopter tail hitting the ground. The helicopter nosed over and impacted the ground. A fire began when one of the fuel tanks was breached.

The ATSB identified that the fatal injuries were due to the post-impact fire, as was the case in a number of other R44 accidents.

This accident highlights the importance of ensuring all doors are secured prior to takeoff. That said, the opening of a door in flight will not normally affect the operation of an R44, but **the instinctive reaction to immediately deal with such an event can be quite strong.** Pilots need to be aware that this reaction may be hard to overcome and in the event of an unexpected situation occurring, such as the opening of the door, it is vital that pilots should continue to 'fly the aircraft'. This includes choosing to land to close the door if necessary.
http://www.illawarramercury.com.au/story/1476946/bid-to-shut-door-led-to-helicopter-crash/?src=rss

---

Reality Check...

The following excerpts are directly from NTSB reports. The intent is not to judge, but to use the harsh lessons experienced by some to increase safety for everyone.

Aircraft: Bell OH-58A
Injuries: 2 Minor; 1 Uninjured
NTSB Identification: **CEN13TA165**

The pilot, along with a biologist and a wildlife survey technician, were performing a survey of mule deer, and were flying along a pre-planned transect when the accident occurred. The pilot stated they were progressing along the route at 50-100 feet above the ground (agl) on a 045 degree heading, with a 5-10 knot left crosswind. He said the terrain began to rise gradually so he added power to approximately 75 percent torque. The pilot said the airspeed was 35 knots, with a GPS indicated ground speed of 30 knots. Approximately 100 feet from the top of the ridge line, the pilot said he heard a slight "pop", and the nose of the helicopter began to yaw to the right. He added power to clear the ridge line, which accelerated the turn and he was unable to correct the yawing motion with the anti-torque pedals. The helicopter continued to spin and crossed over the ridge line backwards. The pilot said that when he pulled the collective to clear the ridge line, it greatly increased the yawing motion. He said, "I told my passengers to hold on and brace themselves because the yawing motion was becoming more and more violent. By this point, the helicopter had made 4 to 5, 360-degree circles. As I continued toward the flatter terrain, it became apparent that I could not arrest the yawing motion. The aircraft contacted the ground, left skid first, in a level attitude and rolled onto the left side."

According to the wildlife survey technician, who was seated in the right rear seat, they started the transect at 1530. At that time the winds were around 10 knots. As the helicopter was coming up a ravine to cross over a ridge line, they were approximately 30 to 35 feet agl with a ground speed of approximately 30 to 35 knots. The technician said when they reached the top of the ridge line, the wind "hit" the left side of the helicopter, and the nose of the helicopter turned into

the wind. The pilot corrected for it and got back on the transect heading, when the wind did the same thing again and the helicopter turned its nose into the wind. The technician said the pilot corrected for the wind and got back on the transect heading when the helicopter began to spin to the right. The technician said he did not hear "a pop" but did recall hearing a pulsating alarm from the cockpit for about 5-6 seconds and then it "went away." The technician did not recall how many times the helicopter spun before it impacted the ground and rolled over. The technician said he exited the helicopter from an open window. He also stated that after he got out of the helicopter, he noted that it had become very windy, approximately 25 knots gusting to 35 knots.

Aircraft: Cessna 172
Injuries: 1 Uninjured
NTSB Identification: **CEN13LA216**

Checking fuel vents…something I always need to remind myself to do:

The pilot reported that he planned on having one fuel stop during the cross-country trip, although he had not selected the actual airport because the airplane still had ample fuel when the engine began running rough during cruise flight. He stated that the engine began running poorly (intermittently) during cruise flight at 4,000 feet mean sea level while operating on the right wing fuel tank. After attempting to resolve the issue with an application of carburetor heat, he made an uneventful precautionary landing at a nearby grass airstrip. After landing, the pilot reported that he couldn't find anything wrong with the engine during a visual check of the engine. However, he heard a "whoosh" sound and heard the metal fuel tank “crinkle” as he loosened the right fuel tank cap. The pilot reported that he attributed these sounds to an accumulated pressure differential that occurred during his rapid descent while operating on a single fuel tank. The left wing fuel tank contained about 2 gallons of fuel. The right tank contained about 10 gallons of fuel. The pilot stated that he thought that he had resolved the fuel tank venting issue when he removed the right fuel tank cap. The pilot subsequently restarted the engine, with the fuel selector drawing fuel from both fuel tanks, and performed an uneventful engine run-up before departing again. Shortly after takeoff, at an altitude of about 300 feet, the engine began running rough. The pilot reported that the engine lost complete power, at an altitude of about 200 feet, as he attempted to return to the airport. The airplane’s left wing collided with a tree during the forced landing into a seasonal marsh.

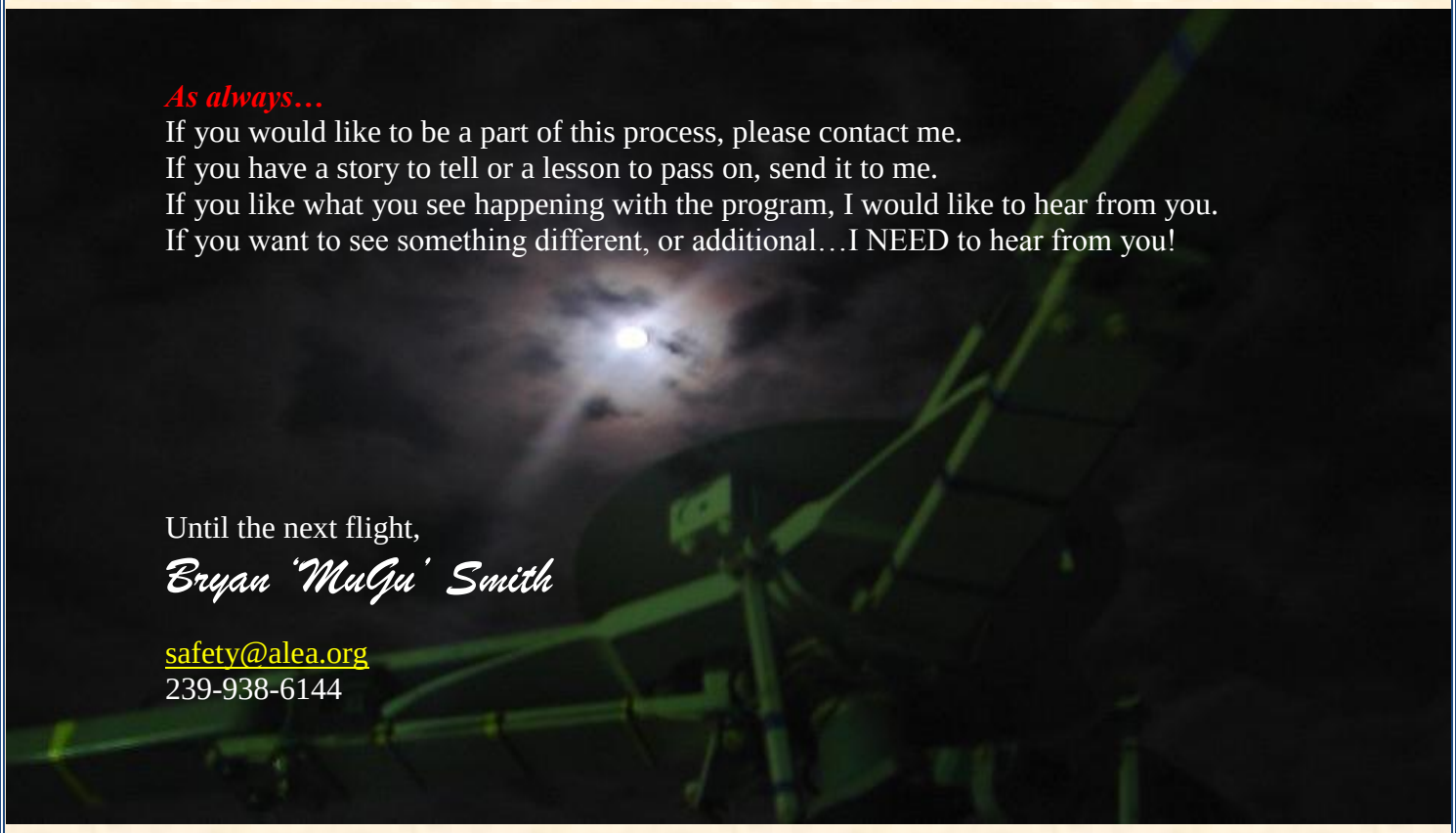
A post-accident examination was performed by a Federal Aviation Administration Airworthiness Inspector. The inspector reported that the external fuel tank vent line, located on the left wing strut, was obstructed by material deposited by mud daubers. Additionally, he noted that the cross-tank vent line was also obstructed. The engine responded to cockpit controls during a post-accident operational test run. Following the engine test run, the inspector heard a “whoosh” sound as he loosened the right fuel tank cap.

For your entertainment:

This story should end with, "and then the safety manager threw up his hands and quit…"

Two Air India pilots put the lives of 166 passengers on a Bangkok-Delhi flight in danger by taking a 40-minute break from the cockpit and getting two flight attendants to operate the plane in their absence. Their stunt almost ended in disaster after one of the flight attendants accidentally turned off the auto-pilot, forcing the pilots to rush back to their seats.

http://articles.timesofindia.indiatimes.com/2013-05-03/india/39008133_1_flight-attendants-cockpit-airbus-321



As always…
If you would like to be a part of this process, please contact me.
If you have a story to tell or a lesson to pass on, send it to me.
If you like what you see happening with the program, I would like to hear from you.
If you want to see something different, or additional…I NEED to hear from you!

Until the next flight,

Bryan 'MuGu' Smith

safety@alea.org
239-938-6144