

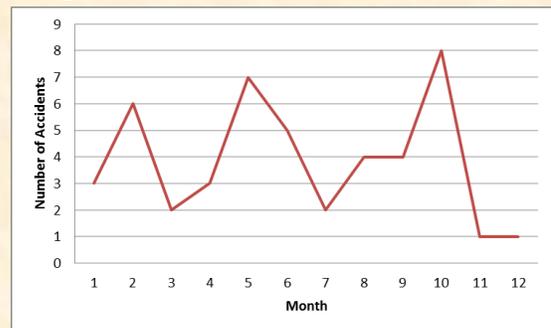
The Safety Wire

September 2012



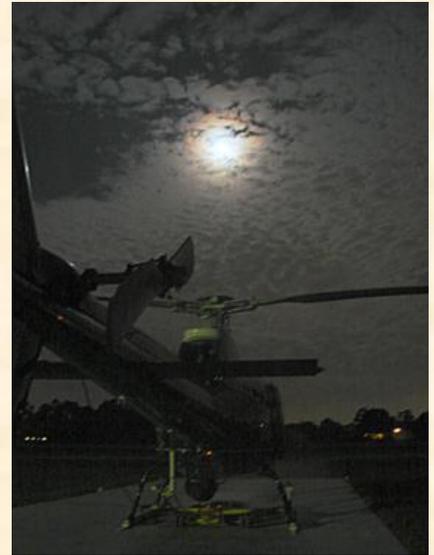
“Is the fall season more dangerous?” This question has been ringing in my head for a couple years now. While attending an ALEA regional safety seminar two years ago, I sat in a class where the instructor suggested law enforcement accident data showed an increased accident rate in the fall. There was no explanation for the increase in accidents, so the question has sat in my head like an unscratched itch. Around that same time I was involved in a training accident, in October, and that only enforced the suspicion that there was something about the fall. As we often do in a traditional ‘safety program’ mindset, I stopped with the basic information and failed to employ a more SMS approach of finding out if the risk assumption was true.

So, what do our numbers actually show? I used the ALEA Law Enforcement Accident Database (www.alea.org/safety/accidents) and was surprised to see that over the last ten years there actually was a spike in our rate around October. It was also interesting to see an increase in the rate around May/June and a smaller one in February. When I reduced the findings to the previous five years, the three peaks were even more defined. So, with the ‘what’ question answered, I tried to look at the more important, ‘why’ question. This question was more difficult to answer.



A significant number of the accidents (54%) in February showed a connection to seasonal weather conditions. There were two IIMC/CFIT accidents, one related to carburetor ice, an engine failure attributed to snow ingestion and a snow bank strike while hovering. Further analysis of each incident would be needed to get a real understanding of the total risk picture. However, the influence of seasonal weather fit with my initial assumptions of what was increasing the accident rate.

The results of a preliminary analysis of June and October were not quite as I expected. Of the total accidents occurring around June and October, 18% and 27%, respectively, were training incidents. This is actually a little less than the average percentage of accidents in law enforcement occurring during training, which is around 30%. When I counted up the number of accidents resulting from mechanical failures, I was shocked to see the number more than doubled from an overall average of 19% to 45% around June, and 44% around October! Why so many mechanical failures during those periods? I asked the question of several coworkers and you can imagine the water cooler conversations that were had. Unfortunately, most of those conclusions are nothing more than educated guesses without peeling back a few more layers of latent factors.



I am determined to look further into this and see what we can do to break these seasonal surges in risk. The only recourse is to contact some of the agencies involved and work with those individuals for the benefit of us all. Consider this ‘Chapter 1’ on the topic and look for more information soon. Until then, maintain a bit of heightened awareness of the situation and if you have any theories, information or experiences...safety@alea.org.

ALEA WEBPAGE SAFETY FORUM QUESTION OF THE MONTH:

FREE STUFF!!

Those of you who make a posting on the September Safety Forum Question of the Month through Friday, October 5th, will be entered into a drawing for an ALEA Reno 2012 t-shirt. *(Yes, International Shipping is included if need be!)*



Congratulations to **Bob Mulhall** of the **Pomona Police Department** for winning the t-shirt in August. Thanks to Bob for taking the time to pass on some great web-based weather resource information as well.

The Safety Forum Question for September is:

Why do you think the mechanical failure rate seems to be higher around June and October?

The **Safety Forum** can be found at:

<http://www.alea.org/forum/forum.aspx?c=General+Discussions&f=Safety>

CALLING ALL CARS...

Doug Russell, Chief Pilot of the Washoe County Sheriff's Office RAVEN unit sent me an email recently following a series of laser strikes they encountered while on patrol in the Reno area. As we all know, this is something that is becoming more and more common, especially for aviators in our industry. Doug's crew was able to capture some video of the incident and use their mapping system to pinpoint where the attack was coming from. This utilization of mission equipment meant that they did not have to fly closer to the location to get an address. They also had the evidence they needed to secure a case against the subject, who is suspected of lasing airliners in the area as well. Of the three crewmembers in the aircraft, the only one who was hit in the eyes was the one person who had their goggles flipped up the stowed position. Remember, NVGs will give you some protection, not complete...but some.



Another interesting point Doug made was that while hunting for the subject on a separate incident they had no additional attacks so they decided to give up on finding the guy and started heading home. At that point the subject started lasing the aircraft again, successfully striking the cockpit 5 times! Many crews I have talked to about laser response plans said they would simply fly away from the scene if they felt the risk was beyond the benefit of catching the offender. Doug's experience shows that this may not immediately remove the threat. Include that possibility in your planning.

ALEA has a laser reporting form on the website that we encourage you to use following an incident. This will help us all track and combat this growing threat:

<http://www.alea.org/areas/laserincidents/>

There is also a link to some great online training that Night Flight Concepts has agreed to offer ALEA members at a discounted rate.

http://nightflightconcepts.com/c&p/ALEA1.html?utm_source=ALEA&utm_medium=ALEA%2Bnews%2C%2BALEA%2Bbanners&utm_term=Night%2Bvision%2BGoggle%2C%2B

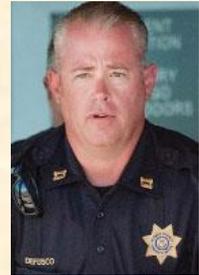
Whatever you choose to do, educate yourself on the threat and have a plan ahead of time. The seconds after getting hit by a laser will not be the best time to start thinking about what your response should be. Thank you to Doug, Larry and the guys at RAVEN for passing on the story and pictures.

FROM THE TRENCHES



John Barger

This month there are several accident reports included below that involved some of our peers. Unfortunately in one of the accidents two Colorado law enforcement officers were lost. I've posted their pictures here so we can remember that in law enforcement these losses are counted by names, not numbers.



Capt. Leide DeFusco

I am happy to report, however, that in two events, the crews were able to respond to a mechanical failure in a manner that allowed them to walk away from the crash and go home at the end of what must have been very long days.

In all of these incidents the details will take months to sort out. A preliminary call to the Columbus Police Helicopter Unit involved two important pieces of information that should be passed on. One, they are initially looking at a catastrophic engine failure as the cause. Secondly, the unit conducts training several times a year, both in-house and with factory pilots, and credits that training with the aircrew's ability to respond to the engine failure. Media photos of the crash site show it completely surrounded with a mess of high wires. Remember, the event happened in the middle of the night, and the crew did not have night vision goggles. Training is critical, but often falls under attack during tough budget times. If your boss is trying to cut your training budget, examples like this may help defend your position.

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 407
Injuries: 1 minor

A Bell 407 helicopter, operated by the New York State Police (NYSP), was substantially damaged during a forced landing to wooded terrain. The certificated commercial pilot sustained minor injuries.

In preliminary statements, the pilot stated that the helicopter was in cruise flight at approximately 100 knots and about 2,500 feet mean sea level when it began un-commanded excursions in the pitch and yaw axes. The pilot responded by pushing the cyclic "forward and left" to compensate for the nose-up pitch and right yaw. The helicopter then pitched "severely" nose down, and entered a spin to the right. At that time, the pilot saw a portion of the tail boom, the tail rotor and tail rotor gearbox falling separately and away from the helicopter. The pilot

entered autorotation, and completed a power-off landing to wooded terrain. After landing, he egressed the helicopter and called for assistance on his cellular telephone.

Witnesses described the helicopter as it passed overhead in cruise flight when "something fell off it" and then it entered a spin. Others stated that the helicopter was spinning before they saw objects fall from it.

Examination of photographs revealed separation of the entire tail boom and substantial damage to the helicopter's fuselage.

Aircraft: MD 369E
Injuries: 2 Uninjured

An MD Helicopters Inc. 369E impacted terrain during a forced landing following a loss of engine power while leveling off from a climb at 1,500 feet (MSL). The certificated commercial pilot and an observer, who was a commercial pilot, were uninjured. The helicopter sustained substantial damage to the tailboom and the main rotor. The helicopter was registered to the City of Columbus and operated by the Columbus Police Department. Night visual meteorological conditions prevailed for the local flight.

Aircraft: Piper PA-12
Injuries: 2 Fatal

A Piper PA-12 was substantially damaged after impacting mountainous terrain near Rye, Colorado. The certificated private pilot and passenger were fatally injured. According to law enforcement witnesses, the pilot and passenger arrived to their planned surveillance location and established radio contact with law enforcement personnel stationed on the ground. These law enforcement personnel, as well as other witnesses, observed multiple passes of the airplane at about 500 to 1000 feet above ground level, followed by a maneuvering of the airplane towards the west and out of their sight. The airplane subsequently impacted terrain about two miles west of the surveillance area in a heavily wooded area at about 10,171 feet. A post-impact fire ensued.

Aircraft: BELL 407
Injuries: 1 Fatal.

A Bell 407 crashed into a lake during a night departure from a river bank. The airline transport pilot was fatally injured. According to a witness in a boat, he watched the helicopter land with the landing light on and the passengers exit the helicopter. The helicopter then departed without the landing light on and turned toward the lake, descended down an embankment, and made a turn over the lake. The helicopter traveled approximately 150 yards when the bottom skids collided with the lake. The helicopter nosed over and made a loud splash. The witness waited for a short moment and then turned on his spot light and moved towards the position of the helicopter. As he moved forward, his boat collided with the tail boom which was floating away from the fuselage. He continued forward and the cabin area was floating upside down.

Aircraft: Cessna 206
Injuries: 1 fatal, 4 minor

In consideration of the underwater egress training mentioned above...

The pilot reported that while landing to the south, just after touchdown, a gust of wind lifted the left wing and the right wing struck the water. The airplane nosed over abruptly, and the cabin immediately filled with cold lake water. He and three other occupants struggled to escape the sinking wreckage through the aft, right-side door, but it was difficult to open since the airplane's flaps were in the down position, which blocked the upper portion of the door. He said eventually he was able to force the door open slightly, and then he and the other three occupants were able to escape the submerged airplane through a 10 to 12-inch gap in the doorway. After all four exited the airplane, they realized that one passenger was still within the submerged wreckage, and they attempted to get back into the cabin area to search for her. The passenger also reported that while sitting atop the submerged and inverted fuselage, he used his feet and legs to force the door open, and the door suddenly opened.

The passenger was found restrained in her seat, with the seatbelt fastened.

Aircraft: MD 369D
Injuries: 3 uninjured

The pilot reported that during a descent, the helicopter's engine sound changed abruptly, and was immediately followed by the engine-out audio horn and a red engine-out annunciator light. She entered an emergency autorotation, and then selected a mostly open area that contained some trees as an emergency landing site. During the emergency landing, the main rotor blades struck several small trees as the helicopter touched down on the uneven, tundra-covered terrain.

The National Transportation Safety Board determines the probable cause(s) of this incident as follows: A fatigue fracture of the governor-to-fuel control PC line, which resulted in a partial loss of engine power.

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 'MaGu' Smith

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