

The

Safety

Wire

June 2014

Please take a few minutes to watch this video...

<http://www.youtube.com/watch?v=Zqw7cbVIIV0On>

“BUT NOBODY DOES THAT”, my wife said while describing a flawed safety procedure at her job. She is a nurse and they are required by policy to use specific personal protective gear in a particular scenario that makes it almost impossible to do their job. It became obvious that the policy was a ‘liability reducer’ and not an effective safety policy. Unfortunately, risk management in law enforcement is often geared towards the same goal, which is to protect the agency from litigation. When risk is managed separately from operations, we are often left with a ‘safety program’ that is a list of simple ‘thou shalt’ and ‘thou shalt not’ rules. As we’ve seen, the problem with a system like this is a disconnect between operations and safety. This is one of the major limits of traditional risk management that is addressed by a Safety Management System.

- SMS is not a document
- SMS is not a binder on the shelf
- SMS is not a computer program
- SMS is not a list of rules
- SMS is not simply hazard reporting, a bulletin board or a flight risk assessment tool...



All of these things are components of an SMS. It is the connection of these elements (and others) with daily operations that makes it an SMS. Doing this is not rocket science, but it is not intuitive and takes a bit of guidance to do it right. I hope that some of you will be able to join us in Phoenix for the Aviation Safety Officer Course. During that course, we will provide not only the individual parts you need to create an SMS, but we will also show you how to make them part of how you do business. Please contact me if you have any questions about the course.

<http://www.alea.org/assets/cms/files/Conference/2014/2014%20EXPO-PC%20~%20Aviation%20Safety%20Officer.pdf>



During the Expo next month, we will also have several other opportunities to get together as a community and discuss safety:

Thursday, July 17:

1300-1430, Room 221A

AVIATION SAFETY OFFICER'S ROUNDTABLE

Open forum discussion, open to all ALEA members interested in aviation safety.

1500-1700, Room 224A

SAFETY SYMPOSIUM: REDUCING TRAINING ACCIDENTS

A comprehensive panel discussion is planned to explore the complex issue of how to reduce training accidents. The panel includes the following industry experts:

[Richard Bookbinder](#) – California Highway Patrol

[John and Martha King](#) – King Schools

[Tim Tucker](#) - Robinson Helicopters

[Richard Bray](#) - Alachua County Sheriff's Office

[Woody McClendon](#) – FlightSafety International

[Nick Mayhew](#) – Bristow Academy, IHST/USHST

Hope to see you all there!

We must learn to live together as brothers,
or perish together as fools

~Martin Luther King Jr.

FROM THE TRENCHES

Bird strikes are a constant threat in our business. It is always beneficial to talk with someone who has experienced one. The follow story and photos are from Hillsboro County Sheriff David Gee, ALEA's Southeast Region Director:

“Around 1730 hours on Christmas Eve, 2007, I was flying my 1979 Cessna 152 at the Plant City [FL] airport. It was a normal departure, weather severe clear, winds out of the east at about 8 kts, perfect day for flying. She flew off like a home sick dove. All was nominal and at about 350 feet I spotted a turkey vulture at my 12 o'clock high. It quickly tucked under (as usual) and headed toward my windscreen. I was too slow for an aggressive maneuver so I put in some right rudder and aileron, staying coordinated but still took an almost instantaneous strike on the left wing (as pictured).”

“I had always thought about bird strikes. The rate tends to soar that time of year in that area but I have to admit that I was not expecting a departure strike at that low of an altitude. When I hit the bird, there was a huge thud and I could feel it interrupt the momentum of the aircraft. Debris flew everywhere. Initially, I started to throttle-back but thought better of it and left the power in. After venting a few short expletives, I realized the airplane was still flying, but quickly realized I had disproportionate lift as the airplane had a left yawing tendency and was not flying clean. We later reasoned that aside from the structural damage, I had knocked off 4 or 5 vortex generators (loss of more than 1 is a no fly) so the aircraft was producing substantially more lift on the right wing.”

“I started to make a turn back to KPCM as I was getting close to KLAL (Lakeland's class D), and then realized that the ailerons had a rough spot (loud clicking as the yoke passed through neutral position) as the bird had penetrated through to the main spar. It seemed like the plane had an overbanking tendency, so I just made gradual turn using a little more rudder but staying as close to coordinated as possible. Figuring it might get into my head, I tried not to look at the damage too much. Drag was significant, so once I got lined up, I made straight in approach with no flaps and kept the speed up about 8-10 kts faster than my usual approach speeds). I made an early decision that if I had a go around, I would head over to Tampa Exec and use the 5000 feet runway. I felt confident the plane would keep flying, but still I didn't want to



stress the wing, and I wasn't sure if fuel tank had been compromised.”

“I think my only advice to others is to realize that it can and does happen every day. You will definitely feel it, and expect the plane to fly a little differently with a damaged wing. Be mindful that you may have to reconsider your speeds and remember there are a lot of different control input options that you learn about in flight school that are taught for these very reasons, so don't forget them. All those hours of rudder turns paid off! The good thing is, I can now spot a buzzard about 10 miles out, just ask the guys in the aviation unit.”

For more information on wildlife strike threat, please review these documents from a USDA/DOD study for information such as the following:

https://www.dodlegacy.org/Legacy/project/productdocs/FINAL%20OSD%20Legacy%20Report%20Joint%20RW%20Bird%20Strike%20Hazardswithcomments%20FINAL_ff16305b-b450-4d1c-9050-4404d614c07c.pdf

The proportion of strikes to helicopters varied among times of day. Although approximately 81.3% of the helicopter flight hours occurred during the day, approximately half (51.3%) of the reported wildlife strikes occurred during the day. Notably, 43.7% of reported wildlife strikes occurred at night even though only 18.7% of the flight hours for helicopters occurred during nighttime hours. Approximately 5% of the strikes occurred during dawn and dusk.

The proportion of all reported wildlife strikes that were damaging to helicopters was 36.3%. The proportion of strikes that damaged helicopters was five times higher for off-airfield strike events (40%) than for on-airfield strikes. The average cost of a damaging wildlife strike [i.e., estimate of damaged parts and repair costs] was \$41,158 per incident. Collisions between wildlife and civil helicopters operating in the US resulted in 52 human injuries and nine fatalities during 1990–2011. The injuries occurred during 47 wildlife strike incidents. Most human injuries consisted of cuts, lacerations, and/or bruising to pilots and copilots when birds impacted the windscreen of the aircraft, shattering the windscreen of the aircraft and sending glass and bird remains into the aircraft cabin.



Nothing said I had to crash.

~Bob Hoover
*After hitting a wire in his P-51 and
losing two feet of the wing.*

RESOURCES

Download the latest FAA SMS Newsletter here:

http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs900/sms/media/sms_newsletter.pdf

...and the latest Safety Briefing here:

http://www.faa.gov/news/safety_briefing/2014/media/MayJun2014.pdf



AEROMEDICAL SAFETY

Dudley Crosson, PhD, ALEA Aeromedical Liaison

Dudley asked to pass on this inquiry to our membership.....

I want to put together an in-depth aerospace physiology course for public safety and need your help to determine if it is feasible or not. It would be a week-long course that delves into the various problems we face during flight. It would be associated with the Dept. of Kinesiology and Exercise so we could also use their EMG equipment to look at electrical activity in neck and back muscles while using a helmet and NVGs. Each day would have a practical component like these to it...the problem is it would be at the University of Hawaii. Yes, college credit would be available. That is the university I am associated with and at which it would be the easiest to set up. If you could help me, please let me know:

1. If you would be interested.
2. If you would be interested, but Hawaii is too far.

If there is enough interest but Hawaii is too far, perhaps I could take this information to another university.

Thank you for your help.

Dudley Crosson
(772) 359-3680
dcrosson@delta-p.com

Airplanes are near perfect; all they lack is the ability to forgive

~Richard Collins

REALITY CHECK...

Note: The following reports are taken directly from the reporting source and edited for length. The grammatical format and writing style of the reporting source has been retained. My comments are added in **red** where appropriate. The goal of publishing these reports is to learn from these tragic events and not to pass judgment on the persons involved.

FBI: Talbot County man fired shots at **[and hit!]** GSP helicopter

<http://www.cbs46.com/story/25759843/pd-man-fired-shots-at-georgia-state-patrol-chopper>
<http://www.ajc.com/news/news/fbi-talbot-county-man-fired-shots-at-gsp-helicopte/ngKB6/>



Light aircraft and police helicopter seconds from colliding above Liverpool waterfront
<http://www.liverpoolecho.co.uk/news/liverpool-news/aircraft-helicopter-nearly-collide-above-7210884>

UK Airprox Formal Report: <http://www.airproxboard.org.uk/docs/423/2013157.pdf>



Ohio woman killed by plane propeller was likely getting food order from pilot

<http://www.foxnews.com/us/2014/06/05/ohio-woman-killed-by-plane-propeller-was-getting-food-order-from-pilot/>

Here is the accompanying NTSB report to the above incident...

Aircraft: DEHAVILLAND DHC 6 200

Injuries: 1 fatal

NTSB Identification: CEN14LA272

http://www.ntsb.gov/aviationquery/brief.aspx?ev_id=20140603X24039&key=1

On June 1, 2014, about 1400 eastern daylight time, an employee from the fixed base operator responding to a DeHavilland DHC-6-200 airplane received fatal injuries when she was struck by an operating propeller blade as she walked toward the cockpit while the airplane was standing on a ramp. The local skydiving flight was standing on the MWO ramp while waiting for passengers to board when the accident occurred.



Aircraft: OH-58A

Injuries: None

NTSB Identification: WPR14TA149

http://www.ntsb.gov/aviationquery/brief.aspx?ev_id=20140327X35539&key=1

A Bell OH-58A collided with a highway after encountering instrument meteorological conditions (IMC). The purpose of the flight was to transport a dog from the Sheriff Department's Canine division to urgent care after it was shot while on duty, about 3 hours prior to the accident.

The pilot stated that he arrived at the air division headquarters and was briefed on the mission by the current on-duty command pilot. They discussed the weather, and he confirmed that visual meteorological conditions (VMC) prevailed at both the departure and arrival airports. He was aware that a weather front was moving through the area, and that he would most likely encounter IMC conditions while enroute. He planned to an alternate landing site should conditions deteriorate.

At 0120, they loaded the injured dog into the rear left footwell, along with the Canine Division Chief who was seated in the rear right seat. The departure was uneventful, but they encountered light rain, strong wind, and low clouds. Both the pilot and the TFO were wearing Night Vision Goggles (NVG's) throughout the flight.

The pilot decided to proceed, and wanted to see if [a] canyon was passable. However, once they got beyond the lights of the city, he lost visual reference after flying into what appeared to be clouds. He reported flying at about 500 feet agl at that time, and was concerned that returning might cause them to collide with obstacles in the area such as wind turbines. He elected to slow the helicopter and initiate a gradual descent with the hope of exiting the clouds. During the descent he realized that the windshield had in fact fogged up, and as such, he turned on the demister. A short time later a highway suddenly came into view and the helicopter struck the ground.

The helicopter struck the highway surface, bounced back into the air, and rotated about 180 degrees. The pilot maintained a low hover and could now see lights ahead. The helicopter appeared to be handling normally, and was not vibrating or making any unusual sounds, so he elected to return to [the] airport. Before landing he asked the TFO to open the door to observe the skids; they appeared intact. The TFO attempted to utilize the Forward Looking Infrared Camera (FLIR) mounted on the nose, and rear-mounted "Nightsun" searchlight to assist with the landing, but they were both inoperative. The helicopter then landed uneventfully.

Subsequent examination revealed that the helicopter sustained substantial damage to the belly structure, with the skids having been spread about 2 feet beyond their normal stance. The FLIR and searchlight both sustained crush damage to their lower cowlings, and the tailskid appeared to have struck the ground.



Aircraft: MD 369E

Injuries: None

NTSB Identification: WPR14TA236

http://www.nts.gov/aviationquery/brief.aspx?ev_id=20140608X15119&key=1

On June 8, 2014, at 0056 a McDonnell Douglas Helicopters 369E landed hard following a loss of engine power during cruise flight in Mesa, Arizona. The helicopter was registered to and operated by [a] police department as a public-use flight. The commercial pilot and commercial pilot rated tactical flight officer (TFO) were not injured. The helicopter sustained substantial damage to the tailboom during the accident sequence.

The flight was a routine patrol, and after flying for about 1.4 hours, the pilot performed a series of flight checks. Once complete, they flew to the north and a short time later

while travelling 60-70 knots, about 700 feet above ground level, the pilot heard an uncharacteristic change in engine tone accompanied by a decrease in engine speed. The pilot began to diagnose the problem, during which time a series of caution warnings lights illuminated followed by the engine-out tone.

The pilot immediately initiated an autorotation, aiming for a tree-lined field to the north. The helicopter cleared the trees, and prior to initiating the flare the pilot realized he needed to turn on the landing lights in order to properly see the ground. He was unable to turn them on in time, and he initiated the flare, landing the helicopter level on the skids. The main rotor blades subsequently struck and severed the tailboom just aft of the tail fairing.

There are no new ways to crash an aircraft...

...but there are new ways to keep them from crashing.

Safe hunting,

Bryan 'Muga' Smith

safety@alea.org

239-938-6144

<http://www.vporttools.com>