

AIRBORNE PUBLIC SAFETY ASSOCIATION



The

Safety

Wire

April 2020

I WASN'T GOING TO TALK ABOUT IT

because there is really nothing more that can be said. While the quality of information we are bombarded with every minute of the day about COVID-19 is sometimes questionable, there is certainly no lack of it. As is the case with any catastrophe of significant measure, our role in the response is fundamentally different than that of the majority of society. Even our

corporate partners who support our work with aircraft, equipment and services find they are needed more than ever. Talking with public safety professionals around the world, many of you are flying more than ever. I've talked to units who are struggling to balance the need for maximum staffing and the desire of employees to care for children who are suddenly stuck at home with few childcare options. Our maintenance staff are working overtime to keep up with the increased flight activity. The world is watching our camera recordings and downlinked video feeds at unprecedented rates. For some, the crisis is creating challenges in transporting medical supplies or patients that they have never faced before. Simple tasks such as managing the hangar and offices or aircraft cleanliness are suddenly more complex.



Risk is a product of the probability of hazard creating a negative event, and the likely damage that event would cause. It is easy to focus on only one side of the risk equation. Discussion about the virus is mainly focused on the probability side. Every risk mitigation put in place, from quarantine and social distancing to sanitizing every surface

on the planet, is geared towards lowering the probability of contracting the disease. The focus on probability is warranted because, like many other hazards, the best way to reduce risk is to never encounter the hazard to begin with.



No risk mitigation is 100% effective. A sharp safety officer will look for two layers of protection. If you have focused on the probability side of the problem, it helps to consider the severity variable. Is there a way we can reduce the severity of the incident if we fail to avoid it?

Unfortunately, we need a medical breakthrough, or two, to really attack the severity side. But not all is lost. COVID-19 is a virus, and our immune system's ability to fight it can make a significant difference in the severity of an infection. The US

CDC gives recommendations to those with underlying, high-risk, conditions to ensure they use any medications or precautions needed to control that condition in order to minimize both the chances of contracting the disease and the impact of an infection. This would include those who take medication for asthma, kidney, lung or heart disease, diabetes, or weight control.

For everyone reading this though, there is one other thing to consider when looking for a way to reduce the impact of an infection. I asked APSA aeromedical liaison Dudley Crosson for his advice, and he responded with one word, "sleep". If we look back at the first paragraph of this newsletter, it is clear how we could find ourselves backed in the corner between protecting society and the limitations of our own humanity. The longer this drags on, the longer we fill in extra shifts or stay up after our shift for hours helping kids with online homework. As the stress builds, the quality of rest degrades. While the world requests a little more from us, we will have a little less to give until the time we are all afforded a break. So, in the middle of wiping down aircraft and maintaining social distance, find time to recharge yourself. Look out for coworkers getting burned out from stress or fatigue. Put a little more honesty into the FRAT. And, please, reach out for help if you need it. The irony of all of this 'social distancing' is that the only way public safety personnel are going to make it through this is by sticking together.

"A good battle plan that you act on today can be better than a perfect one tomorrow."

~Gen. George Patton

APSA Safety Survey Results

Recently, APSA conducted the annual safety survey. Here are some more results related to training. Some N/A responses are from UAS equipped units.

Type of training	Never	< 1x Per Year	1x Per Year	>1x Per Year	N/A
In-house flight training for pilots	6%	11%	22%	57%	5%
Factory/outside flight training for pilots	15%	20%	38%	18%	9%
SIM training	36%	10%	23%	23%	9%
IIMC for pilots	14%	20%	28%	25%	13%
IIMC for TFO/aircrew	33%	21%	14%	13%	19%
Emergency procedures training for TFO/aircrew	18%	23%	21%	22%	16%
TFO-specific skills training	14%	19%	19%	32%	15%
In-house maintenance staff refresher training	18%	14%	24%	18%	26%
Factory/outside maintenance staff refresher training	21%	21%	17%	11%	30%

EMERGENCY PROCEDURE OF THE MONTH

In each monthly emergency situation, discuss what you would do, as a crew, to respond to the following emergency. If the EP does not apply to your specific aircraft, think of something similar.

Pilot medical incapacitation during flight.

ONLINE MEETINGS

APSA conducts regularly scheduled online meetings for safety officers, maintenance technicians, SAR personnel, and UAS operators via a conference call you can join using your computer, mobile device or phone. Online meetings are open to any APSA member. Contract maintenance providers to APSA members are welcome to participate in the maintenance meeting as well. If you would like to join, send an email to: safety@publicsafetyaviation.org



The schedule for upcoming APSA online meetings is as follows:

Maintenance:

Wednesday, May 6, 2020
1:00 PM - 2:00 PM EDT (1700 UTC)

Safety Officers:

Friday, June 5, 2020
1:00 PM - 2:00 PM EDT (1700 UTC)

SAR:

Wednesday, June 10, 2020
1:00 PM - 2:00 PM EDT (1700 UTC)

UAS:

Wednesday, June 17, 2020
1:00 PM - 2:00 PM EDT (1700 UTC)

*"You never lose the buzz of flying. Every time you take off,
it feels a bit naughty, as if you're doing something humans shouldn't really do."*

*~Matt Jones
Boulbee Flight Academy*

RESOURCES

NASA Aviation Safety Report Newsletter: RNAV Approaches

https://asrs.arc.nasa.gov/publications/callback/cb_483.html

Police Aviation News – April Edition

<http://www.policeaviationnews.com/Latest.htm>

Minnesota Forestry Aviation Section - Pinch hitter video

<https://www.youtube.com/watch?v=skaYWwOwR6s>

Aircraft Disinfection Information – Dudley Crosson, APSA Aeromedical Liaison:

<https://publicsafetyaviation.org/images/Videos/Disinfecting.mov>

Human Factors Newsletter

<https://decodinghumanfactors.com>

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.*

Aircraft:	Bell 407
Injuries:	1 Fatal, 2 None
NTSB#:	ERA20FA056

<https://app.nts.gov/pdfgenerator/ReportGeneratorFile.ashx?EventID=20191225X93635&AKey=1&RType=HTML&IType=FA>

On December 25, 2019, about 1713 central standard time, a single-engine, turbine-powered Bell 407 helicopter sustained substantial damage when it collided with terrain while attempting to land. The commercial pilot was fatally injured, and the flight nurse and paramedic were not injured. Visual meteorological conditions prevailed for the flight.

The flight nurse, who was seated in the aft right seat, stated that they had initially responded to an accident in Bonifay, Florida. The flight was cancelled en route, and they were returning to base. The flight nurse said the return flight was normal, and the helicopter was "working beautifully." The pilot approached the helipad slightly faster than normal. As it neared the helipad, the helicopter

made an abrupt "roll" to the left. The pilot did not say anything and did not correct for the roll. The helicopter impacted terrain and it "battered" around on the ground before coming to a stop on its left side. The flight nurse said that he and the flight paramedic unbuckled their restraints, exited the helicopter from the aft right door, and immediately tended to the pilot. The flight nurse said his first instinct was that the pilot had some sort of cardiac event. Using his flashlight, he could see that the pilot's face was blue, he was not breathing, and was unresponsive. The engine was still running, so another pilot (who witnessed and responded to the accident) did an emergency shutdown, and all three of them pulled the pilot out of the helicopter from the windshield and immediately initiated cardiopulmonary resuscitation (CPR).

The flight paramedic, who was seated in the aft left seat, said that about 2 minutes before landing, the pilot asked him and the flight nurse if they were "secure" for landing, and he said he was. The flight nurse said the helicopter was approaching the helipad "a little fast." When it was about 10-15 ft above the ground the helicopter rolled 45° to the left. The flight nurse said, "It felt as if no correction was made and [the helicopter] continued to the ground. I could hear rotors striking the ground." When the helicopter stopped moving, he and the flight nurse exited the helicopter via the aft right door. The engine was still running so it was shut down. The pilot, who was unconscious and not breathing, was pulled from the helicopter and immediately administered CPR.

A witness, who was also a helicopter pilot, said he had just left the operator's hangar in his truck and had pulled onto an adjacent road when he first saw the helicopter making a "shallow approach" to the helipad. He turned his attention away for a moment, but when he looked back, the helicopter had impacted the ground and he could see "flying debris and water from the nearby pond." The witness turned around, drove to the crash site, parked, and called 911. He then observed the flight nurse and paramedic exiting the helicopter. The engine was still running, and the main rotor head was still turning. The witness crawled in the helicopter and observed that the pilot was unresponsive and laying over the controls. The witness had one of the crew members move the pilot so he could perform an emergency shutdown of the engine. The pilot's seatbelt was then unbuckled, and all three pulled the pilot from the wreckage via the windshield. CPR was initiated until an ambulance arrived.

Flight and engine control continuity were established for the engine, main rotor and tail rotor system, by manual manipulation of the anti-torque pedals, collective and cyclic in the cockpit. No mechanical issues were observed that would have precluded normal operation at the time of impact.

The pilot, age 61, held a private pilot certificate with a rating for airplane single-engine land and instrument airplane; a commercial pilot certificate with a ratings for rotorcraft-helicopter and instrument helicopter. He also held a flight instructor certificate with a rating for rotorcraft-helicopter. The pilot's last

Federal Aviation Administration (FAA) second-class medical was issued on April 1, 2019. According to the operator, the pilot had accrued a total of 9,455 flight hours; of which, 9,303 hours were in helicopters.

Press release from the operator, Survival Flight: Late on Christmas, one of our pilots, Doug Davis, tragically passed away after experiencing a sudden heart attack while returning from a cancelled flight, according to preliminary information from the Henry County Coroner.

Aircraft:	Cessna 182G
Injuries:	None
ATSB#:	AO-2019-002

https://www.atsb.gov.au/media/5777307/ao-2019-002_final.pdf

The pilot conducted the take-off at about 1045, as the aircraft passed over the end of the runway, he raised the flaps and continued to climb. The pilot reported that, at about 400 ft above ground level, there was a sudden loss of power and aircraft climb performance, and he observed the propeller was windmilling without sound. He later described the power loss as being similar to the mixture control being pulled back. A witness at Tooradin Airfield recalled that the power loss sounded like a sudden closing of the throttle and there was no rough running.

The pilot lowered the aircraft nose and identified a suitable area to make a forced landing which required a heading change of about 45° to the west. He checked the engine controls and fuel selector were correctly configured and had not been disturbed by parachutists entering the aircraft.

The pilot recalled that he conducted a flapless approach at about 70 kt to the identified landing area. During the descent, he instructed the passengers to prepare for a forced landing.

The aircraft touched down in a relatively flat, open paddock. It initially bounced on the unprepared surface before settling on the ground and passing through two boundary fences. The pilot attempted to slow the aircraft and maneuver to avoid trees. As the aircraft passed through a gap in the trees, the left wing strut collided with a tree, which resulted in the left wing folding over on top of the right wing and fuel leaking from it onto the fuselage. The aircraft further collided



with a third fence, crossed a private road, and collided with a fourth fence, which collapsed the nose landing gear.

The pilot ordered the passengers to evacuate. Both doors were displaced open during the accident sequence and an interior panel from the rear of the cabin had propelled forward onto the parachutists. The panel obstructed emergency egress and was removed by the pilot.

The carburettor fitted to VH-DGF contained aluminium oxide corrosion deposits. These were of sufficient size such that, when loosened, they probably blocked fuel flow within the carburettor, resulting in the aircraft engine suddenly losing power shortly after take-off.

As the carburettor bowl is on the 'downstream' side of the defences to prevent contamination, there are maintenance and storage processes to ensure its serviceability. The corrosion was probably able to form in the carburettor bowl during periods of inactivity. However, it was not possible to determine exactly when the corrosion started and propagated.

***There are no new ways to crash an aircraft...
...but there are new ways to keep them from crashing.***

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