

AIRBORNE PUBLIC SAFETY ASSOCIATION



The

Safety

Wire

October 2020

CHANGE IS IN THE AIR...

No matter where you live, you are likely entering a period of seasonal change. While it's already snowing in my home state of Minnesota, here in Florida we are looking forward to cool autumn weather, when the humidity dips down below 90%. Traditionally, it is a time of increased risk to our operations. The risk is not necessarily higher than we can safely manage. The problem is that we have not had to deal with many of these risks for a while. A problem can cause exponentially more grief if it hits us unexpectedly. Our currency in negotiating season-specific risks has lapsed, and we probably just need a proficiency check ride.

The first thing that comes to mind is the weather. Some of you may have to deal with raging snowstorms or late season hurricanes. Those storms may carry wind, ice, visibility or temperature challenges you have not had to actually operate in for months. Other places, seasonal conditions bring more fog or low ceilings than usual. Those visibility issues may come suddenly after months of mainly blue skies. Starting a cold piston engine could lead to an engine fire if you've forgotten proper priming procedures. You may have gotten out of the habit of checking for frost on the top of the blades or wings. Whatever your weather, you need to consider what will be different for you in the coming days and consider refreshing yourself and your team on things that may otherwise seem like small worries. Don't focus on looking for 'dangerous' stuff, just think about 'different' items.



Other changes come in the form of holidays. Depending on where you live and what holidays you observe, you likely have more than a few coming up. With the holidays comes increased workload for many of us due to spikes in criminal activity or more people enjoying the extra time off getting lost or injured. We also have increased workload at home with family visiting, kids off from school, holiday parties, shopping, etc. Many of us have to work extra hours to cover for those who take vacation time. We often give ourselves extra excuses to ignore our human limitations. It's okay to go into work tired as long as we didn't sleep because we were with family, or at church, or a party, right? Luck and our human condition do not care about the holidays, and risk is calculated the same way it was back in August. This is not a time to loosen our safety precautions. It is the time to give ourselves the gift of, to quote John Glenn, "constructive apprehension."

"The benefits of scientific inquiry, or any form of exploration, cannot always be known when the first steps are taken."

~John Glenn

SMS Techniques

Autumn is a good time to collect information for an annual SMS summary report. The report brings everyone up to speed on what your program has been working on throughout the year. It is also the first step in developing the safety and training plan for next year. One of the powerful, yet simple, tools to include in this process is a safety survey. Keep an in-house survey short, typically no more than 10 questions. Ask what the main concerns are, but also ask for recommended solutions. It is beneficial to not only ask about the bad stuff, but also what they think is working well or something that they think improved moral over the last year. Gauge your safety culture by asking if they feel comfortable making reports, or if they think it is important to participate in the program. The number of surveys you get back is an indicator of your culture as well. If you can, make it anonymous.



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:

SAR:

Wednesday, Nov 11, 2020

1:00 PM – 2:00 PM EST (1800 UTC)

UAS:

Wednesday, Nov 18, 2020

1:00 PM - 2:00 PM EST (1800 UTC)

Maintenance:

Thursday, Nov 19, 2020

1:00 PM - 2:00 PM EST (1800 UTC)

Safety Officers:

Friday, Dec 11, 2020

1:00 PM – 2:00 PM EST (1800 UTC)

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.

Passenger/crewmember with no mask starts coughing in-flight, feels his/her forehead and asks, "is it hot in here?"

"To play a wrong note is insignificant;

to play without passion is inexcusable ."

~Ludwig van Beethoven

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: Cessna 172P

Injuries: None

NTSB#: CEN12TA122

<https://dms.nts.gov/pubdms/search/hitlist.cfm?docketID=52348&CFID=1560567&CFTOKEN=1cc5e402a003f8b7-46E45F70-5056-942C-92728F5BE47A2129>



The pilot of a Cessna 172P, made a forced landing on a street after the engine lost power. The pilot, the sole occupant on board, was not injured. The public use airplane was substantially damaged. The airplane was registered to and operated by the Civil Air Patrol (CAP). Dark night visual meteorological conditions (VMC) prevailed at the time of the accident, and a company flight plan had been filed. According to the pilot's statement, engine power was set at 2300 rpm and the airplane was at 1,600 feet msl. When the airplane was about 6 miles

from the destination airport, the pilot heard a loud "boom" and the engine lost all power. The pilot did not have sufficient altitude to glide to the airport and landed on a highway. When the airplane was on final approach, it collided with power lines. The pilot was able to land the airplane, but was forced to swerve to the right to avoid oncoming traffic. The airplane struck a curb and spun around. The right wing struck a utility pole, resulting in substantial damage.

The engine was disassembled and examined under the direction of Federal Aviation Administration (FAA). When the crankshaft was turned, no movement of the intake or exhaust valves or magneto gears was observed. Upon removal of the rear accessory case, it was discovered that the rear crank gear bolt was loose and the gear dowel pin (part number STD 1065) was sheared. According to the FAA inspector, there was a line on the dowel pin, similar to a pre-existing crack. According to the attending mechanic's report, the sheared dowel pin would cause the camshaft and rear accessory gears to stop turning. According their (NTSB) report, the dowel pin was fractured from the aft end of the crankshaft approximately in plane with the aft face of the crankshaft where it mated to the crankshaft gear.



Aircraft: Bell 206A
Injuries: 1 Fatal
NTSB#: CEN11GA020

<https://dms.nts.gov/pubdms/search/hitlist.cfm?docketID=50694&CFID=1560567&CFTOKEN=1cc5e402a003f8b7-46E45F70-5056-942C-92728F5BE47A2129>

During the flight that preceded the accident flight, the pilot stated to one of the two officers aboard the helicopter that he would not be able to fly for as long as normal because he needed to obtain fuel. Upon completion of the observation flight, the pilot returned to the police department and shut down the helicopter to allow the two officers to exit. The pilot then restarted the helicopter and departed en route to an airport where he could refuel the helicopter. A witness near the accident site stated that he heard the helicopter's engine sputter and stop and saw the main rotor separate from the helicopter. The helicopter entered an uncontrolled descent and impacted terrain. Postaccident examination of the helicopter revealed that there was no usable fuel on board and that the main rotor mast separated as a result of overload due to mast bumping. No preimpact mechanical anomalies that would have precluded normal operation of the helicopter were noted. Mast bumping typically results from a low-G flight condition caused by the pilot pushing the cyclic control forward abruptly from either straight-and-level flight or after a climb. Pushing the cyclic forward abruptly is contrary to the appropriate actions for entering an autorotation, which are lowering the collective pitch control to the full down position, adding antitorque pedal as needed to maintain heading, and applying cyclic as needed to maintain proper airspeed. Review of the pilot's medical records indicated that he had a history of depression, anxiety, and obstructive sleep apnea. Each of these conditions had been documented and treated since 2007, and none were reported to the Federal Aviation Administration (FAA) on the pilot's airman medical application in 2010 or earlier. Any of these conditions may have disqualified the pilot from obtaining an airman's medical certificate. Postmortem toxicological testing indicated that the pilot was taking alprazolam, an anti-anxiety medication, and venlafaxine, an anti-depressant. Alprazolam is one of a class of drugs

which may worsen obstructive sleep apnea, and venlafaxine can cause fatigue and dizziness. The fact that the blood level of venlafaxine found was higher than normal therapeutic levels makes it more likely that the side effect of dizziness occurred and impaired the pilot's performance.

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:

The total loss of engine power due to fuel exhaustion, which resulted from the pilot's inadequate preflight planning and decision-making, and his improper control inputs following the loss of engine power, which resulted in mast bumping and separation of the main rotor. Contributing to the accident was the pilot's improper judgment in acting as a pilot with disqualifying medical conditions.

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

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