

AIRBORNE PUBLIC SAFETY ASSOCIATION



The

Safety

Wire

August 2019

“Know where the exits are” is a timeless piece of advice that’s been passed on from veteran to rookie cop for many generations. A large percentage of you all do not spend much time in a room without identifying at least one other entry and exit point. We know that a door serves as a point where both an unknown threat may enter, and where we may escape an unknown threat. Respecting the importance of exits has the same importance in aviation. The original air combat tactics manual, Dicta Boelcke, was written in World War I by Oswald Boelcke. The manual contained only 8 rules to follow and one was, “When over the enemy’s lines, never forget your own line of retreat.” The rule was intended to remind pilots that they needed to be careful of becoming so engrossed with the mission that they may forget the quickest and safest route back to friendly territory when something went wrong.



The application to our public safety aviation business is obvious. During flight operations, it is easy to be lulled into a false sense of security that the aircraft and crew will perform the same way they did hundreds of times before. While we often brief exits for complex events such as hoist operations or airborne use of force, the awareness of a good way out of a bad situation can be

just as important for routine maneuvers. Take landing and takeoff as an example. What is your exit if the engine quits, or just isn't making normal power, during a take off or landing?

For UAS operators, what is your exit if you have a degraded signal with the aircraft? What about lost GPS signal, a power loss or a sudden threat to the operator's safety while they are flying the aircraft?

Flight training is one area where we, as an industry, need to work harder to identify maneuver abort points and train for when to take those exits. When we train new instructors, they are told to simply, 'be careful' and take the controls if it gets too bad. Instead, we should provide guidance on identifying when the maneuver should be stopped and how to safely end it.

As with all of these cases, unit management is often challenged by not knowing when to take the exit. We make plans and expect them to work either on their own or under pressure from managers. It is no secret, however, that no plan ever goes according to plan. Just like training maneuvers, some plans can be brought back in line



and some just need to be abandoned to make room for a new plan. Knowing how to exit isn't the problem, it is knowing when to exit.

Too often, we are reluctant to exit either because we didn't take the time to plan for it, or we are too proud to bail out. Our attention needs to remain on love for results, not love for the plan. These plans cover everything from a simple maneuver to a training program outline or a major equipment purchase project. Do not be so in love with the plan that you cannot see the potential weak points that demand a potential exit plan should be anticipated. And do not be so in love with your plan that you refuse to take the exit when needed.

Ironically, Oswald Boelcke was killed following a mid-air collision with his own wingman during a dogfight. The crash was described as survivable. However, he did not wear his helmet or use his shoulder harness that day and died from a skull fracture upon impact.

Dicta Boelcke

1. Try to secure advantages before attacking. If possible, keep the sun behind you.
2. Always carry through an attack when you have started it.
3. Fire only at close range and only when your opponent is properly in your sights.
4. Always keep your eye on your opponent, and never let yourself be deceived by ruses.
5. In any form of attack, it is essential to assail your opponent from behind and when he least expects it.
6. If your opponent dives on you, do not try to evade his onslaught, but fly to meet it.
7. When over the enemy's lines, never forget your own line of retreat.
8. Foolish acts of bravery only bring death. The group must fight as a unit with close teamwork between all pilots.

~Oswald Boelcke
WWI Ace

RESOURCES

NTSB Maintenance Safety Bulletin

https://www.nts.gov/safety/safety-alerts/Documents/SA_022.pdf

Australian Transportation Safety Bureau VFR into IMC Report

<https://www.atsb.gov.au/media/news-items/bottom-feature-news-items/2019/dont-push-it-dont-go/>

Cirrus parachute recovery and aftermath video

<https://www.twincities.com/2019/08/09/video-former-iron-range-exec-documents-crashing-parachute-equipped-cirrus-plane-in-canada/>

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.

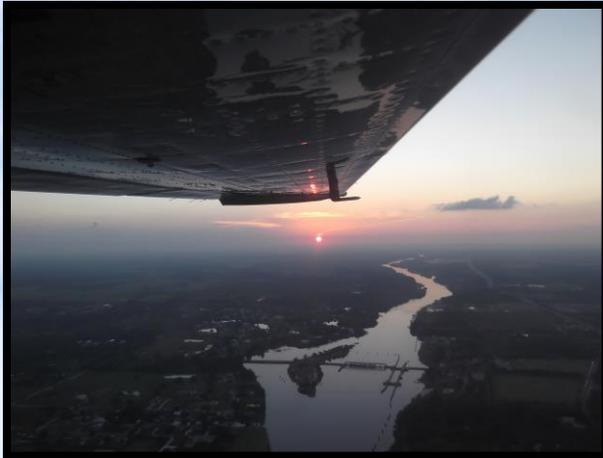
Engine bleed valve failures for turbine engines

Waste gate failure for turbo charged piston engines

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. The schedule for upcoming APSA online meetings is as follows. If you would like to join, send an email to:

<mailto:bsmith@publicsafetyaviation.org>



Safety Officers:

Friday, September 20, 2019
1:00 PM - 2:00 PM EDT (1700 UTC)

Maintenance:

Wednesday, Oct 9, 2019
12:00 PM - 1:00 PM EDT (1700 UTC)

UAS:

Wednesday, Oct 16, 2019
1:00 PM - 2:00 PM EDT (1700 UTC)

SAR:

Wednesday, Oct 23, 2019
1:00 PM – 2:00 PM EDT (1700 UTC)

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.

<https://whdh.com/news/faa-investigating-after-boston-medflight-pilot-falls-asleep-while-transporting-patient-2/>

Aircraft: **Robinson R-66**
Injuries: **2 Fatal**
TSB Canada#: **A19O0026**

http://www.tsb.gc.ca/eng/rapports-reports/aviation/2019/A19O0026/a19o0026.pdf?utm_source=sudbury.com&utm_campaign=sudbury.com&utm_medium=referral

On 04 March 2019, the privately registered Robinson R66 helicopter departed Sudbury Airport (CYSB), Ontario, at 1842hrs on a visual flight rules (VFR) flight to a private helipad near Fauquier-Strickland, Ontario, with the pilot and 1 passenger on board. The helicopter collided with terrain at 2006hrs, 36 nautical

miles (nm) south-southeast of its destination. On the day of the occurrence, the pilot had flown approximately 8 hours (air time) before the collision with terrain. The occurrence flight was the 4th flight of the day.

On the morning of 06 March 2019 (*two days later*), the police were notified of the overdue aircraft. A large-scale aerial search was initiated by the Joint Rescue Coordination Centre Trenton. In the afternoon of 11 March 2019, the wreckage was spotted from the air, approximately 18 nm west-northwest of Timmins. Both occupants had been fatally injured. The helicopter was destroyed. There was no post-impact fire, and the emergency locator transmitter (ELT) did not activate.

Graphical area forecast charts for the time period in which the occurrence flight took place forecasted broken ceilings at 4000 feet above sea level and localized reduced visibilities as low as 1 1/2 statute miles in the destination area. The pilot held a Canadian private pilot licence – helicopter, a night rating, and a valid Category 1 medical certificate; he did not hold an instrument rating.

Tree damage and the damage to the helicopter indicated that the aircraft was in a steep nose-down, left-bank attitude when it struck the ground, on an approximate heading of 120° magnetic. The flight instruments were examined to determine their readings at the time of impact; however, the only useful information obtained was from the airspeed indicator, which showed a reading of 107 knots at impact.

Aircraft: Cessna 182
Injuries: 1 Fatal
NTSB#: SEA99GA007

https://www.nts.gov/layouts/ntsb.aviation/brief2.aspx?ev_id=20001211X11346&ntsbno=SEA99GA007&akey=1

On October 23, 1998, about 1400 Pacific daylight time, a Cessna 182P, N1324M, registered to and operated by the U.S. Border Patrol as a Public Use flight, collided with trees and subsequently the mountainous terrain near Deming, Washington. Visual meteorological conditions prevailed at the time, and the flight was utilizing agency flight following. The aircraft was destroyed by impact damage and a post-crash fire. The commercial pilot, the sole occupant, was fatally injured. The flight originated from Bellingham, Washington, about one hour prior to the accident. U.S. Border Patrol personnel reported that the purpose of the flight was for routine surveillance of the local area.

Shortly after takeoff from Bellingham International Airport, Bellingham, Washington, the pilot responded to a call and assisted with aerial support near the U.S./Canadian border. When the aerial support was no longer required, the pilot cleared the area, and continued his surveillance activities.

Shortly after 1400, a helicopter pilot flying in the area of Deming, reported that smoke was observed along the southwest side of Sumas Mountain. The pilot

went to investigate and found the accident aircraft engulfed in fire. The approximately 30 degree sloping terrain was covered with dense forest. It was noted that the tops of several trees, located downhill from the main wreckage, were broken off. A passenger on board the helicopter took an aerial video of the accident site, which confirmed visual conditions. The smoke from the wreckage was rising nearly straight up.

A witness, who was traveling on a dirt road located about one mile northwest of the accident site, stated that he observed the aircraft flying at about 800 feet above ground level in an eastbound direction. The witness stated that the aircraft was flying straight and level and traveling about 90 knots. The witness lost sight of the aircraft behind trees for about five seconds. The witness stated that when he came out from behind the trees, he saw a fireball that was in line with the airplane's direction of travel and about the same height that was consistent with the airplane's altitude.

The Senior Patrol Agent working in the communication center located at the Blaine Sector Headquarters stated that at about 1300, the pilot, who was already in the air, responded to a call of a sensor trip at the border on Markworth Road, Lynden, Washington. Agents were on the ground and also responding. At 1332, the pilot advised the communication center that a logging vehicle was observed in this area. The agent on the ground stated that he observed the aircraft flying in the area at about 500 to 600 feet above ground level, before leaving the area. The agent on the ground stated that he transmitted to the pilot that fog was rolling in from the west. The pilot did not respond to the transmission. There was no further record of contact from the pilot to the communication center.

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

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

Safe hunting,

Bryan 'MuGu' Smith

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