



The

Safety

Wire

May 2023

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 206B

Injuries: 1 Fatal

TSB Canada#: A06W0106 <http://www.tsb.gc.ca/eng/rapports-reports/aviation/2006/a06w0106/a06w0106.asp>



The pilot of the Bell206B helicopter was conducting water-bucketing operations in support of forest-fire suppression activities. At approximately 1600 mountain daylight time, the helicopter contacted trees adjacent to a shoreline, broke up, and came to rest in an inverted position. The pilot, the sole occupant, was fatally injured. The pilot was observed to be suffering from allergy-like symptoms. At about 1400, the pilot approached the camp medic to get something for his allergy symptoms, and was provided with a bottle of Reactine® (10mg pills). He took two pills with him and returned the bottle. The label on the bottle contained a warning advising caution when operating vehicles as the medication may cause drowsiness. Another bottle (Reactine) was found at the accident site with one pill remaining in it. The water bucket was found at the shoreline, and its dump valve was in the open position. The bucket is 14-foot

long when suspended. The dump valve normally closes automatically by way of a tensioned wire cable when suspended and will only stay open when not suspended. The bucket was tested after the accident and functioned normally.

There was damage to trees between the cutline and shoreline, and there were landing skid marks in the bark of trees bordering the cutline where the helicopter came to rest. These marks were on the lakeside of the trees. One tree-top was broken from a bending load. There were indications that, during the break-up sequence, the tail rotor blades struck some trees and bushes between the lake and the cutline. There were ground scar and component indications that the engine was developing high power at the time of impact, and that the engine continued to run for a brief period after the impact. Several main rotor blade strike marks were found. One was on the helicopter tail boom just aft of the horizontal stabilizer, where the tail boom was severed. The second strike mark was on the right side of the cabin at the pilot door post. The last strike mark was in the ground immediately to the front of the fuselage. This latter point held most of one blade horizontal and parallel to ground level, buried approximately eight inches. This blade was intact and attached to the main head and trunnion. The other blade was severely damaged, with indications of strike(s) at high power. The mast had been sheared off just below the trunnion, with indications of severe mast bumping by both sides of the trunnion droop stops. According to his logbook, the pilot had approximately 100 hours of longline experience and 40 hours of sling load experience. The pilot had neither been trained nor authorized to conduct water-bucketing operations by his previous employer or by Remote Helicopters (NWT) Ltd. There was no indication that he had any water-bucketing experience. Findings as to Causes and Contributing Factors:



1. The pilot undertook a water-bucketing mission for which he did not have the required training and experience.
2. The pilot engaged in flight operations with pronounced allergy symptoms, which probably contributed to reducing his ability to perform complex multi-task missions.
3. It is probable that the pilot took a quantity of an allergy medication that could have affected the pilot's ability to stay alert and be aware of all surrounding mission factors
4. The operator had no system in place to ensure that flight crews did not undertake missions or use equipment for which they were not trained.

Aircraft: AS 350 B2

Injuries: 2 Fatal; 1 Serious

NTSB#: CEN10FA424 http://www.nts.gov/_layouts/nts.gov/aviation/brief.aspx?ev_id=20100722X21328&queryId=6ffd9ec0-e5a2-4182-b1d2-57995b6247c9&pgno=155&pgsize=200

The surviving paramedic reported that while en route to the destination hospital to pick up a patient, a conversation began about flying on a coyote hunt. The pilot abruptly began a low-level maneuver in an attempt to demonstrate a coyote hunt flight. As the



pilot maneuvered at low level, the helicopter and main rotor blades impacted trees and then terrain. An examination of the airframe and engine did not reveal any preimpact malfunctions or failures that would have precluded normal operation.

Toxicological testing performed on specimens from the pilot detected the presence of numerous medications, including hydrocodone (a prescription narcotic for pain

treatment), diazepam (a prescription medication with sedative effects) and chlorpheniramine (an over-the-counter sedating antihistamine). It is likely that these medications would have impaired the pilot's judgment and ability to maintain control of the helicopter. A review of the pilot's medical history found medical treatment for several conditions that were not reported to the Federal Aviation Administration, the certificate holder, or the operator.

PROBABLE CAUSE: The pilot's impaired judgment, due to medications, which led to an abrupt low-level maneuver and subsequent impact with trees and terrain.

Aircraft: Cessna 206

Injuries: 1 Fatal

NTSB#: ERA15FA361 http://www.nts.gov/_layouts/nts.gov/aviation/brief.aspx?ev_id=20150918X10954&key=1

A Cessna U206E floater-equipped airplane, was substantially damaged when it collided with terrain near Spring Hill, Florida. The certificated commercial pilot was fatally injured. Instrument meteorological conditions prevailed at the time of the accident, and an instrument flight rules flight plan was filed for the flight that departed Page Airport (FMY), Fort Myers, Florida. A preliminary review of air traffic control communications provided by the Federal Aviation Administration (FAA) revealed the pilot's original flight plan was from FMY to the Lake Keystone Seaplane Base (57FL), Odessa, Florida, where the airplane was based. When the pilot arrived at 57FL, he told air traffic control that he had the seaplane base in sight and cancelled his IFR flight

plan at 0833. A preliminary review of radar data revealed that the airplane then made a series of turns in the vicinity of the seaplane base before the pilot requested an IFR clearance to the Brooksville-Tampa Bay Regional Airport (BKV), Brooksville, Florida. The pilot was cleared by air traffic control for the ILS RWY 9 instrument approach into BKV. Radar data revealed the airplane was established on the approach until reaching the final approach fix, when it descended below the glide-scope and radar contact was lost about a mile from the airport. There were no distress calls from the pilot. One witness stated that he first heard the airplane's engine "cut out." When he looked up, he saw the airplane come out of the clouds and it "started to spiral down" over his house. A second witness said he heard the airplane approaching and the engine "got extremely loud, almost at full throttle" just before it came into his view. The witness said the airplane was at an "extremely angled" nose-down pitch and was at a high rate of speed. He did not see the impact due to trees. The airplane came to rest in the backyard of a private residence. An on-scene examination of the airplane revealed that all major components of the airplane were accounted for at the site and there was no post-impact fire. The weather conditions reported at BKV, at 0853, included overcast ceiling 500 (with it variable between 400 and 800 feet), temperature 24 degrees C, dewpoint 22 degrees C.

The pilot held a commercial pilot certificate with ratings for airplane single-engine land, single-engine sea, and instrument airplane. He also had 55.5 hours of simulated instrument time and 15.8 hours of actual instrument experience

Practical SMS

What is the VNE of your aircraft? What is your max gross weight? How many seconds can you push the engine into the yellow, or red, during takeoff? How do you know those limits? They are in a manual, right? How would you find out those limits if they were not in the manual? Fly the aircraft until something bad started to happen and then back off? What are your safety limits? Usually, we define them by pushing until something bad starts to happen. Part of your SMS is Safety Policy. For many of us, it is not our favorite part of the risk management process, but that doesn't make it any less important. Policy is often what determines our safety limits. For policy to be effective, it must be done right. The limits must be realistic and meaningful. Employees must understand why the limit was set and how to comply. They need to stay up to date as equipment and missions evolve. One weak area of safety policies is human factors limits. We are usually good about having policies that limit daily flight time, duty time, minimum rest, requirements for medications and illness, landing offsite or diverting for weather, etc. We fail, however, to consider the logistics needed to make those policies realistic. What will the agency do if an employee exceeds the daily duty time and there is a mission? Who will fill in for an employee who has to take a medication not approved for flight? If I land offsite for weather, how will I secure the aircraft, buy fuel or communicate the situation to dispatch? With each safety policy you put in place, ask yourself what is needed to help employees actually follow the policy, especially in the

worst-case scenario. Just saying, “this is the new policy, just follow it,” is usually insufficient

ONLINE MEETINGS

APSA conducts regularly scheduled online meetings for safety officers, maintenance technicians, SAR and Natural Resources 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: tpalmer@publicsafetyaviation.org

The schedule for upcoming APSA online meetings is as follows.



Maintenance:

Wednesday, June 14, 2023

1:00 PM - 2:00 PM EDT (1700 UTC)

Natural Resources:

Wednesday, June 28, 2023

1:00 PM - 2:00 PM EDT (1700 UTC)

UAS:

Wednesday, July 12, 2023

1:00 PM - 2:00 PM EDT (1700 UTC)

Safety Officers:

Friday, July 28, 2023

1:00 PM - 2:00 PM EDT (1700 UTC)

SAR:

Wednesday, August 9, 2023

1:00 PM - 2:00 PM EDT (1700 UTC)

“No man will make a great leader who wants to do it all himself or get all the credit for doing it”

~ Andrew Carnegie

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.

Drone Strike