

# Aviation Human Factors Industry News

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From the sands of Kitty Hawk, the tradition lives on.

Hello all,

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## 37 years ago: The horror and heroism of Air Florida Flight 90

**A U.S. Park Police helicopter pulls two people from the wreckage of an Air Florida jetliner that crashed into the Potomac River when it hit a bridge after taking off from National Airport in Washington, D.C., on Jan. 13, 1982.**

On last Sunday, the nation's capital was pummeled with up to 8 inches of snow, the first significant winter storm in Washington in more than three years.



Thirty-seven years earlier, on another frigid Jan. 13, a similar storm pounded the D.C. area and led to one of the most haunting tragedies in the city's history: the crash of [Air Florida Flight 90](#) into the icy depths of the Potomac River. It was a pre-digital, pre-cable universe on that bleak Wednesday afternoon in 1982. But a TV crew stuck in gridlocked traffic nearby [captured the graphic footage](#) after the Boeing 737 struck the 14th Street Bridge, just a few miles from the White House.

The images would become seared into the memories of Washingtonians through the years: the Potomac swallowing the plane except for a slice of its tail section; the dazed eyes of a passenger, her head barely above water as she gripped a safety ring during a rescue attempt; a truck hanging over the bridge after being struck by the jetliner; a survivor clinging to a rope line dangled from a U.S. Park Police helicopter.

Flight 90, operated by the now-defunct Air Florida, was headed to Fort Lauderdale-Hollywood International Airport, a popular winter weather escape route. Moments after takeoff, the plane with 74 passengers and five crew members [failed to maintain altitude](#) and slammed into the bridge, striking seven occupied vehicles and plummeting into the Potomac.

Four passengers and one flight attendant were rescued; four motorists on the bridge were killed.

The day was also marked by stunning acts of heroism. Military personnel from the Pentagon raced to the scene to help in rescues. Others on the river's edge threw in makeshift lifelines, some fashioned out of belts or battery cables, to survivors thrashing about in the water.

Arland Williams was one of six aboard the aircraft who initially survived. But Williams would drown after dramatically passing the helicopter rescue rope to others. The 14th Street Bridge was renamed in his honor in 1985.

Roger Olian, a sheet metal worker ensnared in a nearby traffic jam, was believed to be the first person to jump into the water with a rope entwined around his waist, but he had to be reeled back in when he got stuck on ice.

Bystander Lenny Skutnik, a Congressional Budget Office assistant who tore off his coat and cowboy boots and plunged into the Potomac, was able to tow one passenger, Priscilla Tirado, to shore.

Don Usher and Gene Windsor, two Park Police helicopter pilots, managed to pull out four people.

The National Transportation Safety Board determined the cause of the crash was pilot error, including improper de-icing procedures.

The lessons from the Air Florida disaster would put a spotlight on everything from de-icing to issues with start-up air carriers for years to come.

Jan. 13, 1982, had a second reason to be a dark day in Washington, D.C., history: About 30 minutes after the Air Florida incident, a subway train derailment in the heart of downtown led to the deaths of three passengers, the first fatalities involving the city's Metro system.

<https://www.nts.gov/investigations/AccidentReports/Pages/AAR8208.aspx>

## Crash: Saha B703 at Fath on Jan 14th 2019, landed at wrong airport

A Saha Airlines Boeing 707-300 freighter, registration EP-CPP performing a freight flight from Bishkek (Kyrgyzstan) to Karaj (Iran) with 16 crew and a cargo of meat, was on approach to Karaj's Payam Airport's runway 30 (length 3660 meters/12,000 feet) when the crew **descended towards and landed on Fath's airport 31L** (length 1000 meters/3300 feet), overran the runway, broke through an airport perimeter wall, crashed into houses past the end of the runway and burst into flames at about 08:30L (03:00Z). So far one survivor (the flight engineer) and 16 bodies have been recovered. One house was destroyed, a number of houses were damaged.

Emergency services reported 16 bodies (15 male, 1 female) have been recovered so far. One survivor was taken to a hospital.

**Another aircraft had confused the same airports** but gone around in time, see [Incident: Taban MD88 at Karaj on Nov 16th 2018, went around from very low height at wrong airport.](#)

Iran's Air Force confirmed the aircraft belonged to Saha Airlines. The only survivor recovered so far was the flight engineer on board of the aircraft.



<http://avherald.com/h?article=4c19bb8a&opt=0>



<https://www.flyingmag.com/persistent-threat-loss-control>

[https://aviation-safety.net/database/hpbarometer\\_gallery.php?year=2018](https://aviation-safety.net/database/hpbarometer_gallery.php?year=2018)

## **ACCIDENT CASE STUDY BLIND OVER BAKERSFIELD**

It's a December afternoon in 2015. A pilot, his wife, and three children are excited to begin the journey to their old hometown of Henderson, Nevada, for a friend's surprise party. But soon after departing San Jose, California, the flight encounters weather for which the **VFR-only pilot is ill-prepared**. His troubling decisions—spurred by self-induced pressure and overconfidence in his skills—seal the tragic outcome of what was to be the start of a joyous holiday vacation.



Join the AOPA Air Safety Institute in **examining the circumstances** that led to tragedy. Then, please **share lessons learned** to help others avoid a similar fate.

Link to certificate of completion and ASI transcript: <http://bit.ly/acsblindoverbakersfield>

This video qualifies for **AOPA Accident Forgiveness**.

<https://youtu.be/ROCUheRin9U>

## Florida man decapitated in freak helicopter accident identified, authorities say

A maintenance man working on a helicopter in south Florida was decapitated in a freak accident last Thursday after the main rotor blades suddenly jerked up and down before fatally slicing the 62-year-old man, authorities said.



Salvator Disi died Thursday near the hangars at Brooksville-Tampa Bay Regional Airport, Hernando County Sheriff's Office confirmed. Two men were using a power cart to jumpstart a helicopter when it began acting erratically – moving up and then down.

“This motion caused the main rotor blades to strike one of the men, who was working on the helicopter,” the sheriff's office said in a written statement.

During a news conference, Hernando County Sheriff Al Nienhuis told reporters that, even though foul play is not expected, a full investigation will take place.

“Obviously a death that is a little unusual...and we want to make sure we have all the answers,” Nienhuis said. “It's tragic that those individuals are not going to be able to give their loved one a hug again.”

Disi was certified to command multi-engine airline airplanes and pilot commercial helicopters. He had a drone pilot certification, was certified as a flight instructor for single- and multi-engine planes and in 2010 was certified as an advanced ground instructor.

The helicopter Disi was working on belonged to Dr. Alfred Bonati, an orthopedic surgeon at the Bonati Spine Institute in Husdon, Florida. Bonati was at the scene when the accident occurred.

The aircraft is believed to be a 1993 Bell 230 twin-engine light helicopter, according to the Tampa Bay Times, which cited Federal Aviation Administration records.

## **Mechanic's error blamed for 2017 German helicopter crash in Mali**

The 2017 crash of a German army Tiger helicopter in Mali which resulted in the death of two crew members was caused by a **mechanic's error**, a German defense ministry report claims. A **mistake** during a rotor blades configuration led to the autopilot automatically turning itself off when the pilot pointed the Eurocopter Tiger's nose towards the ground.

This caused the disintegration of the main rotor blade, leaving the crew with “no chance to avoid the accident,” according to the report.



The Tiger helicopter had been serviced by Airbus team which [apparently forgot to set the blades' airflow angle correctly](#). As the helicopter was flying roughly 155 mph at an altitude of 1640 ft over the Gao desert, the Tiger's autopilot switched itself off believing that it had recognized a manual override, leading the helicopter to tilt forwards abruptly. Once the vehicle had started to descend, parts of the aircraft broke off, including the main rotor blades.

<https://www.dw.com/en/mechanics-error-blamed-for-2017-german-helicopter-crash-in-mali/a-46694354>

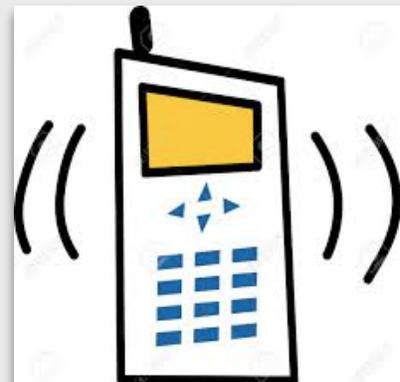
## **Piloting a Helicopter? Don't Check That Cell Phone. Report Suggests**

[Cell phones](#) are not just hazardous on the roadways, but can be in the air as well. [Pilot distraction](#) was a significant factor in the crash of an Enstrom 280FX helicopter last July 18 in Ireland, according to a new, final report on the accident by the Ireland Air Accident Investigation Unit.

The Chinese-owned Enstrom Helicopter Corp. builds 280FX piston-powered helicopters that have made recent inroads in the European trainer market.

In the July 18 accident, the pilot was practicing maneuvers, including quick stops, hover and hover-taxi, in a tidal lagoon near Carrahane Strand in County Kerry.

"The pilot had decided to take a short break from practice and elected to land in the lagoon which had a landing surface of soft, wet sand," according to the AAIU report. "When the helicopter was touching the ground but still light on the skids, [the pilot's mobile telephone rang](#)."



He glanced at the telephone which was mounted on a bracket beside the instrument panel in order to identify the caller. The pilot reported that, at the same time as this [momentary distraction](#), a gust of wind from the west hit the right-hand side of the helicopter. The helicopter rolled on to its left-hand side causing significant damage."

The AAIU said the wind tipped the helicopter over in the soft sand, as the left skid served as a pivot point for the "dynamic rollover." The pilot was uninjured.

The FAA Rotorcraft Flying Handbook advises pilots on recognizing dynamic rollover and quickly recovering from it.

"The FAA states that once started, dynamic rollover cannot be stopped by the application of opposite cyclic alone," according to the AAIU report. "Even when full opposite cyclic is applied, the main rotor thrust vector and its moment follows the helicopter as it continues to roll. [Quickly applying down collective is the most effective way to stop dynamic rollover from developing.](#)"

[The report suggests that even momentary distractions during helicopter landings can be dangerous.](#)

"Landing a helicopter is a critical phase of flight when circumstances can change rapidly," the report said. "For this reason, any distraction during landing can contribute to an upset unless a prompt intervention is initiated. Many pilots now carry Portable Electronic Devices (PEDs) such as mobile phones, tablets, GPS units in the cockpit; [all of which may provide useful functions, but are also a potential source of distraction.](#)"

[http://www.aaiu.ie/sites/default/files/report-attachments/2018-018%20FINAL%20REPORT\\_0.pdf](http://www.aaiu.ie/sites/default/files/report-attachments/2018-018%20FINAL%20REPORT_0.pdf)

[https://www.faa.gov/regulations\\_policies/handbooks\\_manuals/aircraft/media/aa-h-8083-21.pdf](https://www.faa.gov/regulations_policies/handbooks_manuals/aircraft/media/aa-h-8083-21.pdf)

## 11 Aviation Quotes That Could Save Your Life

When all else fails, follow this advice...

1) Rule number one: no matter what happens, fly the airplane.

2) Aviate, Navigate, Communicate.

If you're faced with an emergency, always remember to fly the airplane first, navigate to a point of landing second, then communicate your emergency.

3) When in doubt, hold your altitude. Nobody ever collided with the sky.

4) Truly superior pilots are those who use their superior judgment to avoid those situations where they might have to use their superior skills.

5) Fuel is liquid altitude. The only time you have too much is when you're on fire.

6) Flying, like life, is full of possibilities: can't do...won't do...shouldn't do...

7) It's better to be on the ground wishing you were the air, than in the air wishing you were on the ground.

8) Never let an airplane take you somewhere your mind didn't get to five minutes earlier.

9) Emergency landings are done to save lives, not airplanes.

10) The three most useless things in aviation are runway behind you, altitude above you, and fuel not in your tanks.

11) There are old pilots and bold pilots, but no old, bold pilots.



## Australian Safety Authority Seeks Proposal On Fatigue Rules

Australia's safety authority seeks [feedback on proposed fatigue rules](#) and plans to [address maintenance personnel](#) in subsequent revisions.



Australia's Civil Aviation Safety Authority (CASA) is taking a look at its fatigue management rules at the behest of community stakeholders. While the proposal is limited in scope to operations personnel, expansion to include other sectors, [including maintenance](#), is expected.

Fatigue management continues to come to the forefront of national aviation authority regulatory agendas.

[Proposed Civil Aviation Order \(CAO\) 48.1 Instrument 2019](#) was published in response to formal recommendations made after an independent review. The new rule is applicable to air operators, flight-training organizations and some flight-crew license holders, and it will replace the current prescriptive rule with an outcomes-based approach. It also will consolidate all [fatigue rules](#) into a single instrument, creating a central location for current and future rulemakings on the subject.

While the proposal does not address maintenance personnel, CASA says it intends to [distribute surveys](#) to collect information in support of regulatory development that would make fatigue rules applicable to maintenance, cabin crew and air traffic control personnel.

CAO 48.1 is expected to be released in February. High-capacity regular transport operators will be required to comply with the new rules by September. All other operators must comply by March 2020. Comments on the proposed operational fatigue rules are due Feb. 10.

## **Canadian Safety Board's Annual Watchlist Highlights SMS, Fatigue**

Transportation Safety Board of Canada calls for fatigue regulation and improved Safety Management Systems. The Transportation Safety Board of Canada (TSB) has released its annual watchlist, highlighting safety issues across all modes of transportation. For aviation, [Safety Management Systems \(SMS\)](#) and [fatigue management](#) remain top priorities.



[Fatigue was named as a contributing factor in 34 aviation-related TSB incidents in the last 25 years.](#) Citing a recent U.S. National Transportation Safety Board report naming pilot fatigue as a contributing factor in an Air Canada aircraft's near-miss of a crowded taxiway, the TSB renewed its call for modernizing flight duty-time regulations and finalizing a March 2017 proposal that would impose more stringent pilot limitations.

While the maintenance engineer duty-time regulation is not specifically addressed in the annual report, the watchlist is closely aligned with a 2017 Canadian Parliament committee report, which noted [“the importance of adequately managing fatigue at all levels within the commercial aviation industry, as fatigued aircraft maintenance engineers . . . can . . . pose serious risks to aviation safety.”](#)

The TSB watchlist also calls for expansion of current SMS requirements to all commercial operations—to include air taxi and commuter operators and companies that maintain their aircraft—and better oversight of current SMS systems to ensure [“effective risk-mitigation measures are being implemented.”](#)

Finally, the TSB calls for quicker response to its own recommendations, stating “the slow pace of the regulatory process to implement TSB recommendations only serves to perpetuate safety risks, putting Canada behind some international standards.” The report cites more than 60 outstanding recommendations, a third of which are more than two decades old.

## **Aviation Safety Letter/Sécurité aérienne - Nouvelles**

This is your Transport Canada e-Bulletin notification for **TP 185, Aviation Safety Letter (ASL)**. To go online to view and download this document, please click on the link below:



**Title:** Aviation Safety Letter (ASL)

**Number:** TP 185

**Issue:** 4/2018

**Link:** <http://www.tc.gc.ca/eng/civilaviation/publications/tp185-menu-5395.htm>

### **Ordering of Transport Canada Publications and Forms**

Visit our online forms catalogue: <http://wwwapps.tc.gc.ca/Corp-Serv-Gen/5/Forms-Formulaire/>

## Cessna 150 crash caused by fuel exhaustion

The pilot reported that, while on base to final at the airport in Denton, Texas, the engine “quit.” He added the Cessna 150 could not reach the runway, so he conducted a forced landing in a small field 1/2 mile from the airport. The airplane hit a tree during landing, which resulted in substantial damage to the fuselage and wings.

The FAA inspector who responded to the accident noted that, when he arrived, he only observed [a few drops of fuel remaining in the airplane’s undamaged fuel system](#). He further stated that, before removal of the wings from the airplane for transport, about 1.5 gallons of total fuel was drained from the fuel tanks.

Probable cause: The pilot’s improper fuel planning, which resulted in a total loss of engine power due to fuel exhaustion.



NTSB Identification: [GAA17CA121](#)

This January 2017 accident report is provided by the [National Transportation Safety Board](#). Published as an educational tool, it is intended to help pilots learn from the misfortunes of others.

## ASSP Foundation Releases Fatigue Report



AMERICAN SOCIETY OF  
**SAFETY PROFESSIONALS**

*"By setting parameters, we identified behavioral changes in how people conduct work over time," said Dr. Lora Cavuoto, the project's principal investigator.*

*"Wearable technology can uncover precursors to larger problems and help establish safety interventions that may call for scheduled breaks, posture adjustments, or vitamin supplements that help the body."*

The American Society of Safety Professionals Foundation has released a [fatigue research report](#) that demonstrates the value of [wearable technology](#) in the workplace, with the foundation also encouraging employers to make a New Year's resolution to monitor the fatigue levels of their workers in order to reduce injuries and increase productivity. The three-year study was led by Dr. Lora Cavuoto at the University at Buffalo and Dr. Fadel Megahed at the Farmer School of Business at Miami University of Ohio and involved researchers from Auburn University and the University of Dayton.

The study ended in December.

["Fatigue is a hidden danger in the workplace,"](#) but now we've tackled the measurement and modeling of fatigue through wearable sensors, incorporating big data analytics and safety engineering," said Cavuoto, principal investigator on the project. "Information is power, so knowing when, where, and how fatigue impacts worker safety is critical. You can't identify solutions until you pinpoint the problems."

Funded by the foundation, the research involved 25 participants wearing unobtrusive wrist, hip, and ankle sensors while completing three tasks commonly performed by manufacturing workers – assembly, stocking, and remaining in a static or flexed position. Each person worked in three-hour increments. The study demonstrated that meaningful safety data can be collected by an employer in a cost-effective manner without interfering with a worker's daily routine.

"By setting parameters, we identified behavioral changes in how people conduct work over time," said Cavuoto. "For example, we saw how workers performed the same task in the first hour as compared to the third hour, when fatigue became a factor. Wearable technology can uncover precursors to larger problems and help establish safety interventions that may call for scheduled breaks, posture adjustments, or vitamin supplements that help the body."

The researchers noted that ankles and feet, the lower back, and eyes were reported to be frequently affected body parts, and a lack of sleep, work stress, and shift schedules were leading selected causes for fatigue. To deal with fatigue, respondents reported they drink caffeinated beverages, stretch or do exercises, and talk with co-workers.

The fatigue research report is one of many research initiatives expected over the next several years in support of ASSP's goal to elevate occupational safety and health worldwide. A repository of the research papers and code resulting from the project is available at the team's ResearchGate project folder.

[https://www.assp.org/docs/default-source/assp-foundation/fatigue\\_final\\_earlydistribution\\_121718.pdf](https://www.assp.org/docs/default-source/assp-foundation/fatigue_final_earlydistribution_121718.pdf)

<https://www.researchgate.net/project/Advancing-Safety-Surveillance-using-Individualized-Sensor-Technology-ASSIST>

## Public-Private Partnerships Will Test Airborne Identification Of Drones Nationwide

The FAA is set to authorize as many as eight industry-financed projects to examine various options for airborne drone identification, according to a notice published in December in the Federal Register.

Drone DJ relays a report from the Wall Street Journal which indicates that the goal of the program is to "verify technologies and provide real-world data to hasten broader regulatory steps aimed at significantly expanding commercial uses of unmanned aircraft."



[The inability of authorities to identify and track](#) drones has been a major hurdle to the integration of UAVs into the National Airspace.

The announcement of the remote-identification initiative just before Christmas went by largely unnoticed, but could have significant impact. The agency plans to concentrate on small-scale, short-term field trials before developing long-term strategies, according to the report.

One of the major issues preventing drone flights over people or populated areas is the [lack of identification and tracking options](#) that are dependable and reasonable priced, according to the report. A major question that remains to be answered is whether such data will be broadcast using cellular technology or IP networks

## WHO's 2018 Road Safety Report Shows Increasing Fatalities

*Where progress has been made, it is largely attributed to better legislation, safer infrastructure, improved vehicle standards, and enhanced post-crash care.*

The World Health Organization has released its Global status report on road safety 2018 this month, concluding in it that road traffic deaths [continue to rise worldwide and are killing 1.35 million people annually](#). The report says road traffic injuries are now the leading killer of children and young people 5-29 years old. "These deaths are an unacceptable price to pay for mobility," said WHO Director-General Dr. Tedros Adhanom Ghebreyesus. "There is no excuse for inaction. This is a problem with proven solutions. This report is a call for governments and partners to take much greater action to implement these measures."



The WHO report says despite an increase in the overall number of deaths, rates of death relative to the size of the world population have stabilized in recent years, which suggests existing road safety efforts [in some](#) middle- and high-income countries have mitigated the situation.

The report was funded by Bloomberg Philanthropies. "[Road safety is an issue that does not receive anywhere near the attention it deserves – and it really is one of our great opportunities to save lives around the world,](#)" said Michael R Bloomberg, founder and CEO of Bloomberg Philanthropies and WHO's Global Ambassador >

for Noncommunicable Diseases and Injuries. "We know which interventions work. Strong policies and enforcement, smart road design, and powerful public awareness campaigns can save millions of lives over the coming decades."

Where progress has been made, it is largely attributed to better legislation around key risks **such as** speeding, drinking and driving, and failing to use seat belts, motorcycle helmets, and child restraints; safer infrastructure, including dedicated lanes for cyclists and motorcyclists; improved vehicle standards, such as those that mandate electronic stability control and advanced braking; and enhanced post-crash care. But not one low-income country has demonstrated a reduction in overall deaths, **mainly because these measures are lacking**.

The organization's global status reports on road safety are released every two to three years.

[https://www.who.int/violence\\_injury\\_prevention/road\\_safety\\_status/2018/en/](https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/)

## **Stolen Herc Wreck Found**

The discovery of a plane wreck at the bottom of the English Channel will likely solve a **50-year-old mystery** that some believe the RAF and USAF might rather remain below the surface if local lore is correct. Few details have ever been released about the crash of a USAF C-130 that was stolen by a **homesick mechanic** in 1969 but one theory is that it was shot down, ostensibly out of fear it would crash into a populated area.



Sgt. Paul Meyer, [a private pilot and a chief mechanic](#) with the Air Force, got drunk on the night of May 23, 1969, and hatched a plan to fly the transport from RAF Mildenhall back home to Langley, Virginia. He posed as a captain, got the plane fueled and took off.

The plane dropped off radar and military officials on both sides of the pond were tight-lipped about its fate at the time. Wreckage, including a life raft, washed up on the island of Alderney in the Channel Islands. As for Meyer, the authorities just said they presumed he had died [even though](#) a body in what looked like a flight suit was spotted in the same area and apparently left to drift away. An organization called Deeper Dorset believes it has found the wreck of the Herc, and vows to get to the bottom of the mystery. It's urging the military to fess up if it has anything to hide.

“Having located the aircraft we can already dispel a lot of stupid rumors and conspiracy theories, which is certainly half the battle won,” an unnamed spokesman told the Daily Mail. “It is, though, fairly obvious that many facts regarding that day have been withheld and it would be a really good idea if someone got the file out and started talking to us before we start to tell the story our way.” The spokesman said they have clear photos of the wreck [that prove it's the right airplane](#) and they're looking for a deal from a film company to finance the full investigation.