

Aviation Human Factors Industry News

Volume VI. Issue 25, July 23, 2010



Hello all,

To subscribe send an email to: rhughes@humanfactorsedu.com

In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

★Delta Airlines Mechanic Found
Dead Minneapolis St Paul Airport

★Nebraska Dentist Killed When Hit
By Prop

★American continues
investigation into door
separation on a 777

★Pilots of Runaway Jet Won't Get
Jobs Back

★17 JUN 10 FAA Issues Runway
Crossing Clearance Changes FAA
Issues Runway Crossing Clearance
Changes

★Training & Safety: It's All Human
Factors

★Stopping Normalization of
Deviance

★ And More!

Delta Airlines Mechanic Found Dead Minneapolis St Paul Airport

An aircraft mechanic was tragically killed when he got **caught in the doors of an Airbus A319** at the Minneapolis-St. Paul International Airport. Rescue teams rushed to the airport at around **5:30 a.m.**, on Tuesday, June 15, 2010, where they found the Delta Air Lines mechanic lying at the wheels of an parked at gate G-14.

The Hennepin County Medical Examiner's office identified the mechanic as 47-year-old.

Metropolitan Airports Commission spokesperson Pat Hogan reported the accident involved "an issue with the landing gear doors," in which they believe was a tragic and unfortunate accident. The mechanic was apparently working on the **nose gear** of the aircraft when he somehow got **trapped** in the gear doors.

When emergency crews arrived at the scene, they found him without a detectable pulse.

The medical examiner said the mechanic died of a head injury.

Officials have yet to release the details surrounding the accident and say what exactly happened.

Delta officials are reportedly working with investigators. The Minneapolis/St. Paul International Airport police department and OSHA are investigating the accident.

The mechanic had been employed by Delta for five years.



Nebraska Dentist Killed When Hit By Prop

Accident Is Under Investigation

A dentist in Minden, Nebraska was apparently hit and killed by the **turning prop** of a Cessna 172 he owned, but details about what happened are.

The Kearney Hub of Kearney, NE reports that according to local police the 60-year-old dentist, was found dead at Pioneer Airfield (0V3) in Minden just before noon on Thursday.

Photographs have been sent to the FAA office in Lincoln for analysis, but all indications are that the death was accidental.



American continues investigation into door separation on a 777

An American Airlines Boeing 777 whose door ripped off on 15 June remains out of service for repairs, but could resume operations soon, says the airline.

The door separated from the aircraft when **it rolled back upon parking** at the gate at American's hub in Dallas-Fort Worth.

The aircraft arrived as Flight 962 from São Paulo, Brazil with 200 passengers and 14 flight crew onboard. No injuries have been reported.

Because the investigation is still ongoing, American does not know the exact cause of the incident. The airline says it is unsure if the brakes were set and malfunctioned, or if the brakes were not set at all. The Dallas-based carrier does confirm, however, that the **wheels were not chocked** at the time of the incident.



Pilots of Runaway Jet Won't Get Jobs Back

A pair of Northwest Airlines pilots who said they were **distracted** by their personal laptops while flying a jetliner at 37,000 feet last year- and were out of touch with air-traffic controllers for more than an hour-**won't** get their old jobs back.

The incident involving the two **veteran aviators** sparked a media and congressional furor last October. The Northwest jet sped over several states without responding to air traffic controllers and overshot Minneapolis, their destination airport, by roughly 100 miles, before the pilots realized their mistake.

The Federal Aviation Administration initially revoked the licenses of both pilots for **endangering the lives** of passengers and operating the airliner in an "extremely reckless" fashion.

But the men contested the license revocations, setting the stage for a series of legal skirmishes. In March, the pilots signed a settlement with the FAA which ended the dispute and left the door open to their being reinstated to flight status after successfully completing certain training and test requirements. Northwest is now part of Delta Air Lines Inc.

On Tuesday, however, a Delta spokesman confirmed that the veteran captain on the controversial flight, has retired rather than try to seek reinstatement. The first officer on Northwest Flight 188 from San Diego to Minneapolis, declined to retire, according to people familiar with the details. The Delta spokesman said "is no longer employed" by the carrier, but didn't elaborate.

A spokeswoman for the Air Line Pilots Association unit representing Northwest and Delta pilots declined to comment or make the pilots available.



The latest moves mark the end of a high-profile legal and political tussle that to some extent also affected labor relations at the airline. Pilot union leaders complained that FAA officials acted hastily and bowed to public pressure in summarily yanking the pilot licenses. The pilots themselves never admitted any wrongdoing, even though their actions that night became a **symbol of pilot distraction** and stoked a debate over the importance of professionalism while sitting behind the controls

After the incident, regulators and lawmakers moved to bar U.S. airline pilots from turning on personal laptops, cell phones or any other electronic devices while taxiing aircraft on the ground or flying them in commercial service. The incident also exposed weaknesses in the government's system of promptly alerting the military about suspicious or potentially dangerous aircraft.

17 JUN 10 FAA Issues Runway Crossing Clearance Changes

Effective June 30, 2010, air traffic controllers **will no longer** use the term “**taxi to**” when authorizing aircraft to taxi to an assigned takeoff runway. With the change, controllers must issue explicit clearances to pilots any runway (active/inactive or closed) along the taxi route. In addition, pilots crossing multiple runways must be past the first runway they are cleared to cross before controllers can issue the next runway-crossing clearance. **One exception** to the new rule is at airports where taxi routes between runway centerlines are fewer than 1,000 feet apart. In this case, multiple runway crossings may be issued if approved by the FAA Terminal Services Director of Operations.

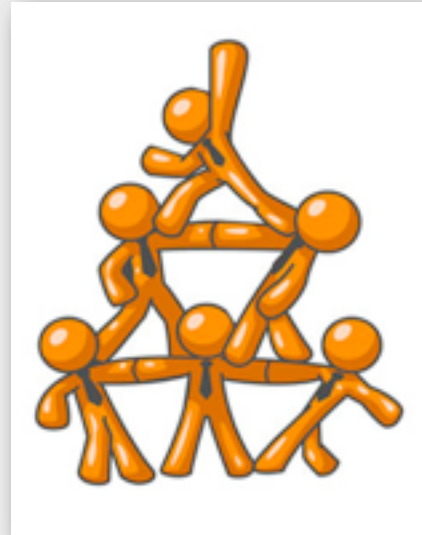


The elimination of the “taxi to” phrase will apply only to departing aircraft. **Arriving aircraft will still hear** the phrase “taxi to” when instructed to taxi to the gate or ramp. However, controllers in these situations still will be required to issue specific crossing instructions for each runway encountered on the taxi route.

For more information on the change, refer to FAA Order N JO 7110.528, which can be found at: <http://www.faa.gov/documentLibrary/media/Notice/N7110.528.pdf>.

Training & Safety: It's All Human Factors

A panel of speakers at the 2010 Safety & Training Summit on June 8 reiterated the importance of an “active safety culture” within an organization and argued that **everything in aviation boils down to human factors**. The Rotor & Wing-hosted Summit in Denver drew experts together from various sectors of the industry. Chris Baur, president of Hughes Corp and a Rotor & Wing columnist, moderated the “**Human Factors in Helicopter Operations**” at the Summit. “The important thing to remember about the accidents and incidents that do happen, that we can learn from, is that it really is all human factors,” said Immanuel Barshi, senior principal investigator of human-systems integration for NASA.



Tim Rolfe, Bristow European Operations chief training captain for the Sikorsky S92, is involved in the company’s safety management systems (SMS) program. Rolfe explains that working for Bristow, which has “an active safety culture, and a system of processes that allow pilots to identify those hazards, risk-assess those hazards and then put procedures in place—I’m totally sold on the SMS idea. **It is entirely necessary to have a very active safety culture at the center of your SMS**, it’s not good enough to just have the processes in place.” Rolfe pointed out the contrast between how a pilot who manages to survive an emergency situation is viewed, versus one who does not. “If a pilot actually saves the day—despite the fact that he’s using poorly put together standard operating procedures, a checklist with errors in it, just faces some bad luck or finds himself in a situation where the [weather] forecast has been inaccurate—but he saves the day, how do we describe the pilot?” The pilot “could absolutely be the hero, so there’s a dichotomy,” he said.

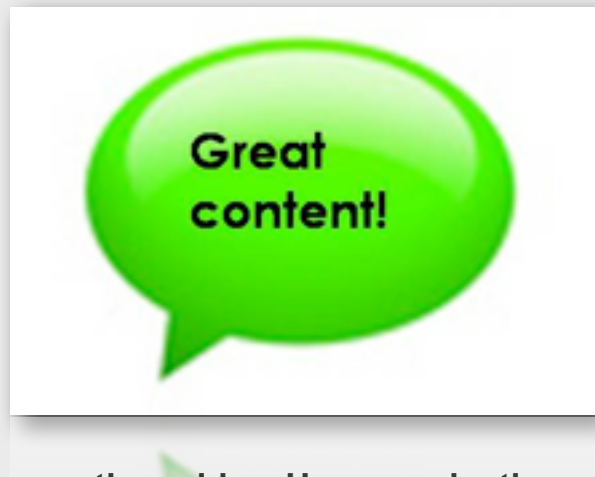
For a full version of this story, see the July 2010 print edition of Rotor & Wing. It will also appear on the website beginning Thursday, July 1.

Stopping Normalization of Deviance

Don't pass up this opportunity. Download the video segments

In his safety DVD, “**Stopping Normalization of Deviance**,” Astronaut Mike Mullane uses the space shuttle Challenger disaster to define this term, **its safety consequences**, and how individuals and teams can defend themselves from the phenomenon.

Colonel Mullane was born Sept. 10, 1945 in Wichita Falls, Texas but spent much of his youth in Albuquerque, New Mexico, where he currently resides. Upon graduation from West Point in 1967, he was commissioned in the U.S. Air Force.



Challenger was the result of a failure of a booster rocket O-ring seal. Viewers of Mullane’s video might be shocked to know this failure **was predicted**: ‘It is my honest and very real fear that if we do not take immediate action to solve the problem with the field joint (O-ring) having the number one priority, then we stand in jeopardy of losing a flight along with all the launch pad facilities.’ (From a NASA memo dated six months prior to Challenger.)

After dramatically defining “Normalization of Deviance”, Astronaut Mullane continues with an explanation of how **individuals and teams can defeat** this dangerous phenomenon through these practices: recognizing one’s vulnerability to it; making it a religion to “plan the work and work the plan”; considering one’s instincts; and, archiving and periodically reviewing near-misses and disasters so the corporation memory never fades.

Astronaut Mullane’s safety video “Stopping Normalization of Deviance” is unique. It is on-target, fast paced, visually captivating and, in places, very humorous.

Segments of his video can be downloaded.

<http://www.mikemullane.com/StoppingNormalizationofDeviance.htm>

Airline's safety violations clear path to pursue reimbursement

Airline's safety violations clear path to pursue reimbursement

Where there is a factual question as to whether the **lack of safety guards** caused injury to the contractor's employee, the workers' compensation carrier for the contractor may pursue a claim for subrogation against the airline.

Case name: Seabright Insurance Co. v. U.S.

Airways, Inc., et al., No. A123726 (Cal. Ct. App. 03/29/10). Ruling: The California Court of Appeal held that a workers' compensation carrier could pursue a subrogation claim against U.S. Airways for injuries suffered by an employee of an independent contractor. It reversed an award of summary judgment in favor of the airline.

What it means: An airline **may not delegate its duty** to provide safety guards on conveyor belts to the independent contractor responsible for maintaining the belts. As a result, where there is a factual question as to whether the lack of guards caused injury to the contractor's employee, the workers' compensation carrier for the contractor may pursue a claim for subrogation against the airline.

Summary: While working for an independent contractor to maintain and repair conveyor belts, the employee's **arm became caught in a moving conveyor that had no shields or cover**. The San Francisco International Airport owned the conveyor belts, but U.S. Airways used them under a permit and had an exclusive arrangement with the independent contractor to have the belts maintained.



The workers' compensation carrier for the contractor sued several parties, including the airline, contending that it breached its duty to **provide a safe working environment and provide adequate warnings and safety devices**. The Court of Appeal reversed the trial court's award of summary judgment in the airline's favor, finding evidence that the airline **was negligent** and that the lack of safety guards caused the employee's injuries.

The airline contended that it was not liable for the accident because it delegated responsibility for the upkeep of the conveyor belts to the independent contractor. The Court of Appeal explained that certain duties imposed by statute **are not delegable**, including the duty to provide guards for conveyors and their moving parts and to provide adequate lighting. Nevertheless, U.S. Airways would not be liable unless its conduct affirmatively contributed to the employee's injuries. The contribution need not be "in the form of actively directing the contractor or employee," the court said, as contribution can happen by omission.

The court concluded that there was evidence the airline violated safety regulations and that the violation created **"a hazard to anyone in the area."** Because a factual question existed as to whether the unsafe condition caused the employee's injury, it was improper to award summary judgment to the airline.

Rethinking The Checklist

Why is it that despite revolutionary training, advanced technology and unprecedented knowledge of the cause of errors, we continue to make those errors? That, of course, is the million-dollar question, a question that Atul Gawande, a Harvard Medical School associate professor and thought leader in error reduction, seeks to answer in his book **The Checklist Manifesto: How to Get Things Right**.

Gawande's research spans multiple industries, including aviation. What he finds, again and again, is that the most effective way to eliminate human error in complex tasks **is to use a checklist**.



Basic, right? You're probably imagining the checklist your technicians already use. But do they really use them?

To illustrate, Gawande points to a common medical problem: the infection of central lines in ICU patients. Of the five million central lines (which deliver medicine and fluids to ICU patients) inserted each year, 4% are infected after 10 days, affecting 80,000 people a year in the U.S., according to Gawande. **The infections are fatal between 5 - 28% of the time.** Those who survive the infections spend, on average, a week longer in intensive care.

Doctors **must take five steps** to reduce the likelihood of infection. The steps - which include things such as washing hands with soap - are no brainers. So, when a Johns Hopkins researcher decided to create a checklist for the steps, doctors essentially rolled their eyes. The researcher did it anyway, then asked nurses to observe doctors for a month. The findings: In treating more than one-third of patients, **doctors skipped at least one step**

Surprised? It may be worthwhile to examine how often your own technicians follow every step of a checklist. Observe them across various shifts and in various specialties, noting where and how often omissions occur. Record your data so that you can slice it multiple ways. The results may be revealing.

They certainly were at Johns Hopkins. For the next year, hospital administrators **authorized nurses to stop doctors** if they skipped even part of a step. Over the course of that year, the 10-day line infection rate dropped from 11% to zero. The researcher followed patients for another 15 months to double-check the numbers and in that period, only two infections occurred.

In other words, central line infections weren't a medical problem; they were **a human factors problem**. Fixing it by insuring doctors followed every step of the checklist prevented 43 infections and eight deaths and saved \$2 million.

Start digging into your organization's data and you'll likely find similar opportunities. One maintenance manager, for instance, recently commented; "two-million dollars worth of screw-ups at the top of my budget every year, and nothing is going to fix that." Finding ways to ensure technicians stick to their checklists could add the \$2 million back to his bottom line. That's a significant feat for a humble piece of paper.

Picture This!

This week's picture this is actually a video of a building demolition gone **terribly wrong** in Vancouver, BC. Amazingly there were no injuries when a wall tumbled down perilously close to pedestrians and vehicles during the evening rush hour. If you think the situation couldn't get any worse, watch this second video, where another wall collapses onto the street, knocking over a utility pole in the process.

<http://www.safetymagazine.com/send/link.php?M=259189&N=1308&L=2382&F=H>

<http://www.safetymagazine.com/send/link.php?M=259189&N=1308&L=2383&F=H>

