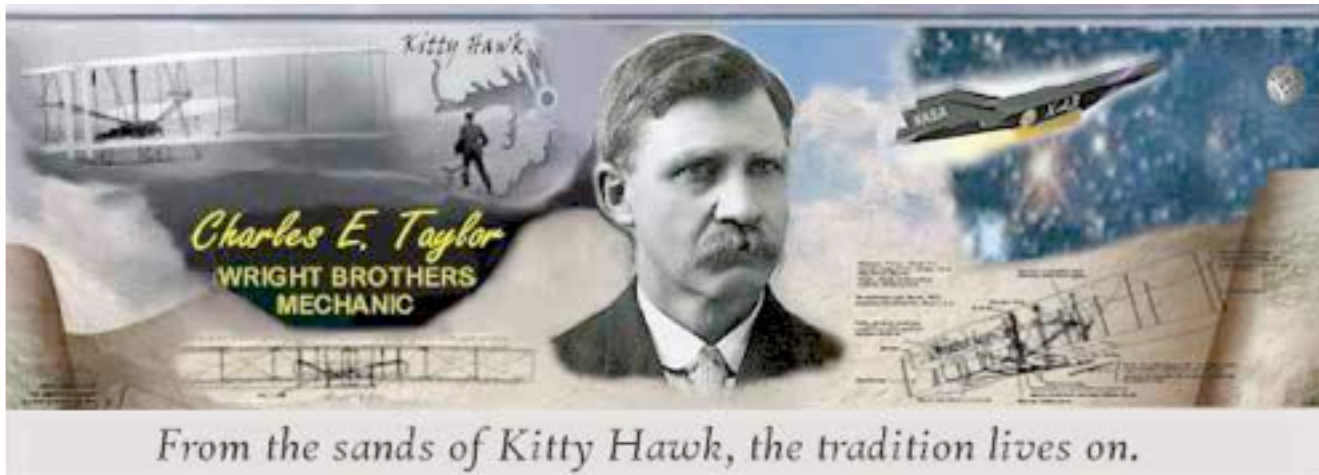


Aviation Human Factors Industry News

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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:

★Backpack may have caused helicopter crash that killed four

★NATIONAL SLEEP AWARENESS WEEK

★Now Twelve New Human Fatigue in Aviation Posters

★Aviation safety rate: One accident for every 1.4 million flights

★CBS Evening News Special Report: Aviation Safety in America

★Investigation: Runway safety at JFK Airport

★GE Faces \$1.2 Million Fine for Jet-Engine Repair Procedures (Washn)

★Accident: ABX Air Cargo B762 at San Francisco on Jun 28th 2008, on fire while parked, no arson

★ And More!

Backpack may have caused helicopter crash that killed four

A helicopter crash in 2008 that killed four may have been caused by the sole survivor, a teenager **not authorized to be aboard** the aircraft whose **pack accidentally bumped a lever**, according to a new report issued by the National Transportation Safety Board. The Era Helicopters Eurocopter AS350 B2 went down near Sheep Mountain on April 15, 2008, just a minute after taking off, according to the NTSB.



Neither state officials nor Era officials knew the youth, at the time, was aboard as the helicopter transported the state employees, including the teenager's stepfather, to work on a telecommunications site, according to the report prepared by NTSB investigator Larry Lewis.

The report says the youth was in the front left seat, sitting next to the pilot, and that he had a shoulder pack about a foot across. In an interview with investigators, the youth said he didn't remember where he put the pack. But crash investigators found it ejected two feet in front of the helicopter, along with a window that broke loose.

The report suggests the youth's pack, left unsecured between the pilot and the teenager, **may have pushed the fuel flow control lever into the emergency position**. The lever was on the floor of the helicopter, near the youth's feet, the report says.

In an interview Thursday, Lewis said he was able to conclude the lever had been moved in mid-flight. The purpose of the lever is to give the helicopter a sudden boost in power if it needs a quick lift, but it cannot be sustained unchecked by the pilot without causing the engine's RPMs to rev to dangerous levels, Lewis said.

"If it's inadvertently placed in that position by interference with the fuel controls unbeknownst to the pilot, by the time he is able to identify the cause of the over speed, or the indications that he's getting, **it may be too late**," Lewis said. "So he's behind the power curve, loses the engine and essentially has no airspeed, no altitude, and just really, really bad terrain underneath."

Read the full story at: <http://www.adn.com/2010/02/25/1157414/bumped-lever-may-have-caused-2008.html>

NATIONAL SLEEP AWARENESS WEEK

Are Your Workers Sleep-deprived?

March 3 to 10, 2010 is National Sleep Awareness Week. Sleep deprivation, whether due to not sleeping long enough or due to interrupted sleep, is a major cause of injuries and fatalities, either on the job or while driving to or from work.

Fatigue itself is hard to measure, but there's little doubt of its symptoms. **Fatigued workers tend to:**

- * Have slower reaction time and respond incorrectly or not at all to what's happening around them
- * Show poor logic and judgment
- * Have difficulty concentrating
- * Be less motivated and more forgetful
- * Have a greater tendency to take risks



If you don't think workers' fatigue is a concern in your workplace, **consider these statistics**:

25% of Canadian adults claim to have difficulty getting to sleep or staying asleep. (Statistics Canada)

31% of Americans say their jobs are directly responsible for their exhaustion. (Harris Interactive poll)

47% of Canadians admit to cutting back on sleep to create extra time in their days. (Statistics Canada)

50% of survey respondents say they have caught co-workers sleeping on the job. (Harris Interactive Poll)

Here's another **sobering thought** about the effects of fatigue: Researchers conducted a study comparing impairment levels in workers with inadequate sleep to people with a blood alcohol level of 0.05 ml. They found that a person awake for 17 hours experiences the same level of performance decline as someone with a blood alcohol level of 0.05 ml/l. Seven hours later - after 24 consecutive hours awake - the person's level of impairment is similar to that of being drunk.

Now Twelve New Human Fatigue in Aviation Posters!

Human Fatigue Awareness/Educational Posters
The Federal Aviation Administration has produced a series of educational posters designed to bring awareness to **human fatigue** in aviation maintenance (MX). Each poster is part of a MX fatigue themed series designed to improve awareness of fatigue related issues. The posters provide information on how **MX personnel can change their lifestyle and work habits** to improve safety and quality of life. These eye-catching posters provide helpful and practical tips to battle the problem of human fatigue.

Click on the poster to download (high resolution PDF format) FREE. Print as many as you'd like to display in work and rest areas.



While supplies last, you can contact your local FAAST team representative for 11" x 17" paper copies. Order in sets.

<https://hfskyway.faa.gov/HFSkyway/FatiguePoster.aspx>

Aviation safety rate: One accident for every 1.4 million flights

Air travel has been getting increasingly frustrating, with fees, crowds and other hassles, but passengers may be glad to know that 2009 was a **banner year** for aviation safety. The year's accident rate for Western-built jet aircraft was the second lowest in modern aviation history -- just behind 2006, according to a new report by the International Air Transport Association. The group started keeping records in 1964.

"It's the airlines continuing to invest in **training and technology** on the aircraft," said Steve Lott, the group's head of communications for North America.

"We like to remind passengers that they are still in very safe hands. Aviation is still the safest form of transportation, and looking at the statistics, it's still very rare and growing increasingly rare that we see any accidents."

In 2009, the global accident rate for Western-built jet aircraft equaled to one accident for every 1.4 million flights, the air transport group found.

To put it another way, if you were to take a flight every day, odds are you could go 3,859 years without an accident, according to the group's report.

When accidents did happen last year, pilot handling was a contributing factor in 30 percent of the cases, showing **how important the human element** is to aviation safety, Lott said.



"How do we improve that? It really comes down to **training**," he said.

Runway excursions, such as the December incident when an American Airlines jet overran a runway in Kingston, Jamaica, accounted for 26 percent of accidents in 2009.

Ground damage accounted for a 10th of accidents last year. How do those happen? One example is when a catering or fuel truck runs into a plane parked at the gate, causing damage and flight cancellations, Lott said.

The 2009 accident rate was significantly higher on Eastern-built aircraft, or those made in Russia and China, but flights on those planes represent about 2 percent of all flights around the world, Lott said.

The International Air Transport Association represents 230 airlines around the globe, including major U.S. carriers such as American, Continental, Delta and United.

CBS Evening News Special Report: Aviation Safety in America

Aviation safety - CBS Evening News with Katie Couric

When was the last time you thought about how much sleep your pilot had? Or how much training the air traffic controller had? Or where the airplane **got its last tune-up**? Statistically, the United States is enjoying the safest skies in aviation history.

But how safe is air travel in a struggling economy?

In the investigative series, "Where America Stands," CBS News Travel Editor Peter Greenberg a hard look at airline safety in the year since the crash of Continental Flight 3407.



<http://www.petergreenberg.com/2010/02/12/cbs-evening-news-special-report-aviation-safety-in-america/>

Investigation: Runway safety at JFK Airport

Government inspections at New York's largest airport reveal **serious safety problems**.

These runway hazards at JFK were uncovered by an Eyewitness News 4-month investigation.

The FAA had earlier warned the Port Authority of possible enforcement action if **safety deficiencies** at JFK did not improve.

Yet, our investigation has found problems with **broken runway lights, poor signage, and inadequate training** getting worse.



Airport lights reflect a beautiful mosaic, but they are also critical to safety.

In an analysis of documents, interviews, and undercover video, a portrait emerges of New York's largest airport, JFK struggling to keep up with maintenance.

A video shows a major taxiway where the green centerline lights suddenly end, leaving a quarter-mile stretch of darkness:

"Those lights are there to guide the aircraft from point A to Point B," explained former JFK controller, Barrett Byrnes.

The recently retired JFK air traffic controller says **poor maintenance of airport lights and signs** has been a problem for awhile and often leads to pilot confusion.

"You would have 30-40 a night, pilots turning off stopping on exit or runway exit just stopping, because taxiway lights would end, so they'd be confused," said Byrnes.

A look at JFK'S latest annual FAA inspection shows an unusually high number of safety deficiencies, **38** to be exact from taxiway and runway lights that "Need to be repaired", to runway markings painted in the wrong direction, to broken lenses, and lights that were OTS: out of service.

"That to me is a real concern," said pilot and aviation attorney, Justin Green.

"To have all these violations, all these problems with how the runways and taxiways are marked is a little surprising to me," said Green.

For perspective, we obtained the latest FAA inspection report for O'Hare airport in Chicago.

Although much larger than Kennedy, it had only 8 deficiencies, compared to Kennedy's 38.

Perhaps most troubling in 2008, the F-A-A put the Port Authority on notice saying if problems are not corrected "Enforcement action may be necessary". Yet in the next inspection, deficiencies **shot up by 60%** and the FAA did nothing.

"If your just going to pencil whip stuff and say you have errors but never really correct them, then you really have safety issues," said Barrett.

Pilots getting lost on the runway can lead to deadly accidents.

In 2006, at a Kentucky airport, 47 passengers were killed when a Delta commuter flight tried to take off on an unlit runway .

In 2005 at JFK, a pilot of a jumbo jet filled with passengers got lost in fog and mistakenly crossed a runway as a cargo plane was lifting off. They missed colliding by just a few feet, the fear obvious in the pilot's voice.

Pilot: "He's taking off."

Controller: "Are you clear?"

Pilot: "We are clear now of runway, we crossed the runway."

Controller: "You crossed the runway?"

Pilot: "**We crossed the runway by mistake.**"

On any night, let alone a foggy one, a stretch of taxiway unlit and dark can add an element of danger at an already busy and challenging airport like JFK.

"Any confusion out on the runway or taxiway can ultimately lead to an accident," said Byrnes.

Video:

<http://abclocal.go.com/wabc/story?section=news/investigators&id=7272799>

GE Faces \$1.2 Million Fine for Jet-Engine Repair Procedures (Washn)

General Electric's GE Caledonian unit may be fined \$1.2 million for **"improper" aircraft-engine maintenance procedures** at a repair station in Scotland, the Federal Aviation Administration said Friday. The FAA, which certifies repair stations abroad, proposed the civil penalty for maintenance **involving 101 engines** from January 2005 to May 2008, according to a statement from the agency. General Electric, the world's largest jet-engine maker, is based in Fairfield, Conn.



The company used a procedure to remove parts from engine mounts that **deviated from the process outlined by the manufacturer's manual**, the FAA said. GE Caledonian has 30 days to respond to the FAA.

Accident: ABX Air Cargo B762 at San Francisco on Jun 28th 2008, on fire while parked, no arson

Stainless Steel Coil Spring Within Flexible Oxygen Hose

The NTSB have released their final report concluding:

The National Transportation Safety Board determines that the probable cause of this accident **was the design** of the supplemental oxygen system hoses and the **lack of positive separation** between electrical wiring and conductive oxygen system components. The lack of positive separation allowed a short circuit to breach a combustible oxygen hose, release oxygen, and initiate a fire in the supernumerary compartment that rapidly spread to other areas.




Contributing to this accident was the Federal Aviation Administration's failure to require the installation of nonconductive oxygen hoses after the safety issue concerning conductive hoses was initially identified by Boeing.

<http://avherald.com/h?article=408ec81b/0006>

Tale From Another High Consequence Industry

Track Circuit Had Open Work Order the Week of the Red Line Crash

	Page 1 of 1 MX6PROD	Washington Metropolitan Area Transit Authority Maintenance and Material Management System Work Order Details		Work Order #: 7169867 Status: APPR 06/17/2009 19:20 Type: CM
Work Description: B06 TRACK CIRCUIT B2-304 BOBBING.				
Job Plan Description:				
Work Information				
Asset: ATCS806	B06, ATCS, TRAIN CONTROL ROOM,	Own. Office: ATCS-TSSM	Parent:	
Asset Tag: ATCS806		Maint. Office: ATCS-TSSM-BRFO	Create Date: 06/17/2009 06:50	
Location: 6158	B06, FORT TOTTEN, STATION, MEZZANINE,	Labor Group: ATCSR4899	Act Start:	
Work Location:		Crew:	Act Comp:	
Failure Class: ATCS002	HIGH FREQUENCY TRACK CIRCUITS	GL Account: WMATA-02-33530-50499270-042	Target Start: 06/17/2009 06:50	
Problem Code: 2142	INTERMITTENT	Supervisor:	Targ Comp:	
Requested By: ATCS		Request Phone: 42061	Sched. Start:	
Chain Mark End: 0		Chain Mark Start: 0		
Failure Reporting				
Name :	Employee # :	Start Time:	Finish Time:	
Cause	Remedy	Supervisor	Remark Date	
Remarks:				

We're now into day two of the NTSB's public hearing on the deadly June 22 Red Line crash and while the safety board has yet to release its formal conclusions on the cause of the accident, hundreds of pages of documents released to the public last Tuesday provide details on their findings.

Investigators found that several days before the crash, a [work order](#) (above) was issued to repair a "bobbing" track circuit at the [very spot](#) where the crash later occurred, on the Red Line tracks near the Ft. Totten station. The NTSB report defines a bobbing track circuit as when "an isolated track circuit transitions from vacant, to occupied and back to vacant again." A maintenance crew had first reported the bobbing circuit on June 17, and a subsequent crew performing a regularly scheduled preventive maintenance inspection on June 18 encountered the same problem, [but no fix was applied at that time due to a thunderstorm](#):

When their testing was complete, they noticed that track circuit B2-304 was bobbing. They stated that no adjustments were made since the [weather was turning bad](#) and the track circuit had just been verified with the shunt test. The ATC mechanics stated that they [did not report](#) that track circuit B2-304 was bobbing to MOC because the [problem cleared itself](#) while they were troubleshooting. The ATC mechanics stated they [were not aware of the open work order](#) regarding track circuit B2-304.

The work order that had been opened on June 17 remained open until the day of the accident, according to the NTSB. They also found that the same track circuit, B2-304, had been reported to have been bobbing back in February 2008, and that work order had not been closed until September of that year. Entries on that work order ["did not contain any information concerning remedial action taken to correct the bobbing track circuit."](#)

[ACSF Offers New SMS Resources To The Charter Community](#)

Safety Management System Components Outlined, Audit Standards Described

In an effort to continuously promote and enhance the safety of on-demand charter operators, the Air Charter Safety Foundation (ACSF) has developed [two resource documents and a brochure](#) addressing the need for, and implementation and evaluation of, [Safety Management Systems \(SMS\)](#) programs.



The first document gives a general overview of SMS, its four components, and its benefits in an operation. SMS regulations mandating that operators have a SMS program have already been adopted in many nations and will soon be adopted in the United States. Many operators are in the early stages of SMS implementation. The ACSF strongly encourages all operators to adopt these programs and participate in an independent evaluation of their SMS.

The second document describes the ACSF Industry Audit Standard (IAS) as an **evaluation tool for SMS**. It answers frequently asked questions by operators on how to implement an SMS, where to find help, and how the IAS evaluates their SMS program. SMS is a key goal to improving safety, and this is why the IAS requires operators to adopt, implement and show continuous safety management improvement.

An air charter operator's SMS demonstrates that **top management is committed to safety** and encourages the engagement of safe practices at all levels of the business. The IAS is a revolutionary audit program that provides a comprehensive, independent review of an operator's compliance with safety and security regulations as well as its implementation and adherence to an SMS.

FMI: www.acsf.aero/sms