

Aviation Human Factors Industry News

Volume VI. Issue 03, January 29, 2010



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

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:

★New Release of MX Fatigue Newsletter

★FREE MX Fatigue Awareness Posters

★Helios 'Mayday' call chills courtroom

★Sky Bahamas CEO: passenger safety most important to us

★Inspection reveals poor maintenance work by Jetstar Pacific

★NTSB Prelim: AS355 Engine Cowling Door Strikes Rotors

★Your Personal Contribution To Safety

★ And More

New Release of MX Fatigue Newsletter

From the FAA Aircraft Maintenance Human Factors Web Portal

This issue features a **labors view** of the challenges of workers fatigue jointly authored by Robert Gless, Assistant Director Transport Workers Union of America, Air Transport Division and Dave Supplee, Secretary Treasurer Association of Machinists and Aerospace Workers. There are other excellent articles by subject matter experts on fatigue.



A Labor View of the Challenges of Worker Fatigue*

About the Author: Mr. Robert Gless, Assistant Director, Transport Workers Union of America, Air Transport Division.

The TWU is dedicated to bettering the lives of working families. The TWU works to safeguard, protect and improve working conditions and living standards of all workers and demand respect, dignity and equality for all. Our active and vibrant members, numbering over 200,000 male employees fly, manage air, train pilots, and control play.



Robert Gless



Dave Supplee

About the Author: Mr. Dave Supplee, Secretary Treasurer, International Association of Machinists and Aerospace Workers, District 102. The IAM is a large and diverse organization, representing 120,000 members across North America. Each member makes a significant contribution to the success of the union. The success of the IAM Organization is in large part due to the dedication and hard work of the members that provide the diversity of the members that form the union.

We represent our respective organizations on the FAA's Maintenance Fatigue Risk Management Working Group. This letter represents the feelings of our union workers in the aviation industry. Rather than tell you our shared plans on the issues surrounding worker fatigue, we offer you this letter that represents the sentiment of our members.

I am a proud American union worker in the aviation maintenance industry. While I will comment about my situation as a certified airframe and powerplant mechanic, many of my feelings are also shared by my thousands of union brothers and sisters that hold other positions in supporting industries world wide (i.e., aviation maintenance, ramp, manufacturing, etc.).

Before talking about fatigue, I want to start by saying that I am tired, stressed, and continuously challenged by the economic conditions that have altered our industry over the past decade. The flying public has become fixated on the

lowest cost ticket and too much of that cost reduction has fallen on the backs of labor. Many airline maintenance operations have closed or consolidated. Large percentages of our pensions have diminished or disappeared. Those of us lucky enough to have escaped a layoff are faced with thousand mile weekly commutes to perform our job, which means we must spend extended time away from home at our own expense. When we work in cities like San Francisco, Chicago, or New York our daily drive is necessarily long so that we can afford decent housing and provide good schools for our families. Today, in 2010, we are working for less than our 2001 hourly wages. There has been no similar reduction in the

price of groceries, housing, raising children, or life's other necessities. The result is that we must increase our work hours, either with our current employer or another.

I am a trained and federally certified aviation mechanical expert. The time I have spent in school exceeds the hours of an undergraduate degree as well as many post graduate professional programs. I take satisfaction and pride knowing that my combination of knowledge, skill, and constant attention to safety keeps our industry as safe as it is. Without my talent and my signature the airplane does not fly! My skill, working with the procedures from the company and the FAA, ensures that the 30-year old aircraft looks

https://hfskyway.faa.gov/Uploads/stany_dalmet/MXFatigue%20Newsletter%20Vol%202%202010_Final.pdf

FREE MX Fatigue Awareness Posters



HUMAN FATIGUE AWARENESS/EDUCATIONAL POSTERS

Human Fatigue Awareness/Educational Posters. High resolution PDF format, download and print as many as you'd like to display in work and rest areas.

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

Helios 'Mayday' call chills courtroom

Relatives of the Helios air crash victims broke down in court last week as they heard a cockpit recording of the flight's final 30 minutes . **Mothers and wives** dressed in black tried to stifle sobs as the recording played on in the packed courtroom during the testimony of French civil aviation expert Philippe Plantin de Hugues.

As the minutes dragged on the only sound that could be heard was an incessant 'beep, beep, beep' like a disconnected dial tone. At intermittent intervals voices could be heard speaking. What they were saying was unclear. Then during the final minutes of the recording a distinct male voice cried out: **"Mayday, mayday, mayday"**. Hearing those words seemed to send chills through the



courtroom and the relatives' unbearable pain was almost tangible. One man covered his hand with his mouth as if to stifle a sob and another woman shuddered while her tearful friend reached out to console her.

In August 2005, **121 passengers and crew died aboard** on the fated Helios flight, which crashed into a hill at Grammitiko north of Athens.

The 'Mayday' call was believed to have been made by Chief Steward Andreas Prodromou minutes before the crash.

Plantin de Hugues, who is employed at BEA (Bureau of Enquiry and Analysis for Civil Aviation Safety), an agency of the French government, responsible for investigating aviation accidents and **making safety recommendations based on what is learned** from those investigations, told the court the black box had been in extremely bad condition when it arrived at their headquarters on the grounds of Paris – Le Bourget Airport.

He said it had taken much time to retrieve the Flight Data Recorder (FDR) and Cockpit Voice Recording (CVR) and that playing copies of both would take up to an hour.

The procedure to dismantle the black box was filmed by the BEA and shown in court. Photographs of the box's memory card were also taken during the entire process.

The Assize Court judges told the prosecution they had not been able to understand everything that had been said on the cockpit recording. The prosecution said this was because the tape had to be listened to several times before being able to make out what was being said and that a transcription of the recording had been made and would be presented to the court by another witness at a later date.

The trial continues this week.

Sky Bahamas CEO: passenger safety most important to us

The landing gear failed on this Sky Bahamas plane last week.

SKY Bahamas president and CEO Randy Butler is keen to reassure passengers of the safety of his aircraft after a SAAB 340 collapsed at the gate when the landing gear failed.

Passengers waiting to board the 33-seater jet at the Lynden Pindling International Airport were horrified when the landing gear failed and the aircraft crashed to the ground at 11.45 am, just 15 minutes before they were scheduled to depart for Marsh Harbour, Abaco, on Thursday.

The flight was cancelled and the eight passengers booked on the noon flight were accommodated on the afternoon flight to Marsh Harbour at 4.30 pm.

Sky Bahamas' 1 pm flight from Marsh Harbour to Nassau was also cancelled and all but two of the eight passengers scheduled to take that flight went to Nassau on the evening flight at 5.30 pm.

Only the captain and flight attendant were on board and Flight Standards Inspectorate accident investigator Delvin Major said no one was injured.



Inspection reveals poor maintenance work by Jetstar Pacific

The Civil Aviation Administration of Vietnam said an inspection of local carrier Jetstar Pacific last month revealed several mistakes in aircraft, confirming allegations made by a former employee.

The airline's weak quality control system was the reason behind the failings in maintenance procedures, the aviation administration concludes in a inspection report that is expected to be released



next week.

The ten-day inspection was launched on November 5 after Jetstar Pacific's ex-chief engineer Bernard John McCune accused the low-cost carrier of **failing to follow proper maintenance procedures**, including monitoring wing engines.

Jetstar Pacific had **its maintenance license revoked** in November and had to send its planes to Singapore for maintenance for about two months, leading to many flight cancellations and delays. It was allowed to resume maintaining aircraft early this month.

The aviation authority said Jetstar Pacific former director Luong Hoai Nam must be held responsible for the mistakes that occurred during his term.

Nam submitted his resignation in September and was relieved of his post on November 10 last year.

He was arrested last Thursday on accusations his mismanagement had caused losses of more than US\$30 million at Jetstar Pacific, which is 70 percent owned by the government.

NTSB Prelim: AS355 Engine Cowling Door Strikes Rotors

'Preflight, Preflight, Preflight'

Yikes... if I had a dime for every time I heard my instructors emphasize the importance of a good preflight (or another dime for every time I said it to me my students once I became an Instructor), I could buy the whole nation health care coverage. Yet another case in point made itself evident last month as the oh-so-expensive (and critical) rotor system of an AS355 was compromised when an engine **cowling door somehow made contact with the rotor blades**. Take my word for it... while the bill will be huge, the cost could have been SO MUCH worse.



This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has been completed.

On December 6, 2009, about 1030 Pacific standard time, an Aerospatiale AS 355F1 helicopter, N548SA, was substantially damaged during cruise flight following [the left engine cowling door opening in flight](#) near Temple Bar, Arizona. The helicopter was registered to and operated by HeliUSA Airways Inc., Las Vegas, Nevada, under the provisions of Title 14 Code of Federal Regulations Part 135. The commercial pilot and six passengers were not injured. Visual meteorological conditions prevailed and a company flight plan was filed for the cross-country flight. The air tour flight originated from the Mc Carran International Airport (LAS), Las Vegas, about 1000, with an intended destination of Grand Canyon, Arizona.

The pilot reported that during cruise flight, he heard a “thumping” noise followed by slight feedback within the cyclic control. The pilot contacted a second company helicopter to have them visually inspect the helicopter in flight. The pilot of the second helicopter informed the pilot that the left engine cowling appeared to be open and partially separated. The pilot initiated a precautionary landing to a dirt road and landed without further incident.

Examination of the helicopter by a Federal Aviation Administration (FAA) inspector revealed that two of the three main rotor blades were damaged. One main rotor blade exhibited a one-inch long gouge about one-quarter of an inch in depth near the blade root. A portion of the left engine cowling was separated and not located.

FMI: www.nts.gov/nts/brief.asp?ev_id=20091209X45217&key=1

Your Personal Contribution To Safety

Errors of judgment may lead to honest mistakes being made; not, in a complex environment such as [aircraft maintenance](#), these can and often do occur on a regular basis. Many are considered as a “[near miss](#),” because the systems of checks and balances that are in place, along with safeguards associated with modern equipment design, usually prevent the error from developing into an unsafe condition or

a significant threat to safety. From our Human Factors training we know that the majority of these events sit at the bottom of the 'error iceberg,' but unless minor incidents and their causes are considered they can materialize into something altogether more serious.

Errors have occurred in much the same way year-after-year, yet as an AMT community generally we appear unable to prevent them or perhaps learn. As a group we need to raise the profile of such occurrences through company reporting schemes and/or rising general awareness through ASAP, ASRS and CHIRP.



In endeavoring to change attitudes to human error, clearly doing nothing is not an option. It is self evident that to “Keep on doing what we are doing,” we will “Keep on getting what we’ve got!”

Having the confidence to raise issues is one of the principal keys to developing a positive reporting culture in our industry. Taking advantage of a confidential reporting program, making an effective contribution to reducing error is certainly not easy, but it must remain a worthy goal.

The benefits of learning from other AMT’s across the industry in a non-threatening environment can only be achieved if individuals are willing to provide the relevant information. In return, it is acknowledged that it is of paramount importance to reporters that the process for discussing incidents has a guarantee of being confidential in order to build the necessary trust that enables the process to succeed.

Do you have an experience to share, from which others might benefit?

US regulators to probe industry on automation

US FAA Administrator Randy Babbitt says he will bring together airlines and human factors experts in April or possibly sooner to discuss the consequences of advanced automation as it applies to pilots, controllers and mechanics.

The basic question that will be addressed at the meeting, says Babbitt, is "Have we automated to the point where the **human** is out of the loop?" The FAA chief was speaking to ATI and Flightglobal in Houston on 12 January after a kick-off event for initial operations of the FAA's automatic dependent surveillance-broadcast services (ADS-B) in the Gulf of Mexico.

Babbitt, a former airline pilot and instructor who continues to fly light aircraft on occasion after becoming FAA Administrator in June 2009, says he initiated the effort in part after hearing from "several airlines" that they were changing operational procedures to call for "a little more hand flying".

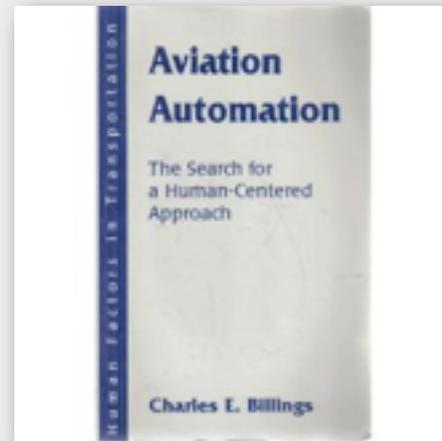
Pilots typically engage an aircraft's autopilot shortly after takeoff, returning to hand-flying mode shortly before landing. FAA rules require that all aircraft flying above 29,000 ft (8,845m) in reduced vertical separation minima (RVSM) airspace be operated on autopilot for safety reasons due to the limited vertical separation between aircraft, but carriers have more leeway at lower altitudes.

Autopilot use is largely determined by efficiency measures in those areas, a reality that would tend to signal increased automation and autopilot use as the FAA moves toward 4d navigation, where an aircraft must pass certain waypoints at a relatively precise time.

The **role of automation and training** has been in the safety spotlight after several recent high profile accidents in 2009, including the stall-related crash of a Colgan Airways Q400 in Buffalo in February, the crash of a FedEx MD-11F during an otherwise normal landing at Tokyo Narita in March and the unexplained loss of an Air France A330 over the Atlantic in June.

Flightglobal recently reported that during its Crew Management Conference in early December that experts are debating whether a seeming deterioration of pilot skills is the symptom of long term effects of operating highly automated aircraft.

Babbitt says the impact of increased automation could also affect air traffic controllers and **maintenance workers**. "I've asked FAA's **human factors experts** to look at it," he says. "We have to make sure a human is the ultimate decision maker."



A key goal of the upcoming meeting, he notes, is to get carriers to share what they've learned on the topic. "If a carrier has developed a good procedure, I want to tell others about it," says Babbitt.

Global airline accident review of 2009

In March this FedEx Boeing MD-11F flipped on to its back when the pilot lost control during a normal landing attempt.

Airline safety in 2009, judged by the number of fatal accidents, **was a little better** than the average for the decade. Better still, this first 10 years of the 21st century, taken as a whole, has seen the lowest accident rates in aviation history by a considerable margin.



The **bad news** is that the constant improvement in safety that has taken place each decade since the Wright Brothers **is now stagnating**. This shows in the fact that, judging by fatal accident numbers, there was a step change in safety performance around the year 2000, but there has been virtually no improvement in safety in the 10 years from 2000 to 2009.

In 2009 there were 28 fatal airline accidents and 749 fatalities across all sectors of the global airline industry, which compares respectively with 34 and 583 for the previous year. But since the beginning of the decade, and particularly since 2003, the number of annual fatal airline accidents has almost leveled out, and 2009 figures continue this trend.

<http://www.flightglobal.com/articles/2010/01/11/336920/global-airline-accident-review-of-2009.html>

Picture This.

This was the scene in a neighborhood this past week end. Unloading sheet rocks for this new house.

The driver side stabilizer sunk into the soft soil and tip the truck to its side. Luckily no one was injured and the house was not damage. The operator was using the remote control to operate the crane section.

Friday night last load he was in a bit of hurry to leave.

