

# Aviation Human Factors Industry News

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Hello all,

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

★Lighten up to protect airline workers from injury

★The spookiest hotels in US that can cost you your sleep

★Airbus Takes On Test-Flight Hazards

★American Eagle, union tout airline's efforts to promote safety

★Why Business Aircraft Operators Need to be Thinking About SMS Now

★FAA Updates Certification Rules for Aviation Products and Parts

★2010 CHC Safety & Quality Summit in Vancouver, BC: Registration Now Open

★\_And More

## Lighten up to protect airline workers from injury

Passengers at airports across the UK and Europe are being asked to pack less in their bags **to prevent injuries to baggage handlers**. Union Unite's campaign '**Lighten up**', is also making a renewed call for airlines to introduce a maximum bag weight of 23 kg.

This is backed by the Health and Safety Executive (HSE) Aviation Industry Committee and the International Air Transport Association (IATA). The current limit is 32 kg.



## The spookiest hotels in US that can cost you your sleep

In the U.S. there are scores of hotels that **claim to be home to ghosts**. 'haunted' hotels advertise their spooky pasts to attract plenty of visitors hoping to catch a sight of guests from another world.

Now, CBS News has compiled a list of some of the spookiest spots around the nation that **promise you a sleepless night**.

1. The Myrtles Plantation, St. Francisville, La.
2. Fairmont Hotels and Resorts, Vancouver, B.C.
3. The Morris Ranch Farmhouse, Greenough, Mont.
4. Wyndham Hotel Galvez, Galveston, Texas
5. Bullocks Hotel, Deadwood, S.D. (ANI)



## Airbus Takes On Test-Flight Hazards

Plane Maker Revises Rules for Its Crews, Advises Airlines on Standards  
aircraft maker Airbus is ratcheting up efforts to cope with a growing aviation hazard: **poorly executed flight tests of jetliners emerging from major overhauls.**



Spurred by a pair of recent flight-test accidents in France and a near-crash in Britain, Airbus says it has revised rules for its own cockpit crews, who are responsible for **checking the safety of newly delivered and overhauled planes.**

In 2007, an Airbus jet being delivered to Etihad Airways crashed into a barrier **during ground tests.**

Airbus also is helping its customers around the world develop tougher standards for how airline pilots should conduct tests to verify proper operation of aircraft **following extensive maintenance.**

Safety experts say the effort, outlined at an aviation-safety conference in Beijing, seeks to address the problem of pilots getting into trouble when computers or other systems act up during airborne checks of **increasingly complex** and automated airliners.

According to the U.S. National Transportation Safety Board, over **one-quarter** of commercial-aircraft crashes since the late 1990s involved some type of testing or ferry flights without passengers. Based on such statistics and recent examples, French accident investigators earlier this year urged European airlines and regulators to develop more-stringent rules and procedures for conducting those kinds of flights.

Flight tests are essential after extensive overhauls, called "heavy checks," because the guts of the aircraft—from miles of wiring to cockpit instruments—are pulled out and either refurbished or replaced. The aluminum shells are painstakingly inspected for cracks, engines are taken

off and flight-control surfaces are removed. Once the work is finished, the aircraft must be tested and flown without passengers to ensure its parts have been reassembled correctly and all systems work as intended.

While some airlines such as UAL Corp.'s United Airlines and AMR Corp.'s American Airlines **rely on specially trained and designated** "check" crews for such flights, other airlines assign regular pilots to verify the plane is safe to resume flying passengers.

In revising its rules, Airbus built on **lessons learned** from a pair of flight-test crashes that highlighted crew **mistakes** and ended up destroying planes.

In November 2008, an Air New Zealand Airbus A320 **on a check flight** crashed into the Mediterranean Sea off the southwestern coast of France, killing all seven people aboard. Investigators determined that while carrying out a low-speed test at an unusually low altitude, the pilots inadvertently stalled the jet by disconnecting the automatic thrust designed to keep it going at steady speed and attitude. In doing so, they failed to understand how the plane's computers would react.

"We see a lot of problems with [airplanes] decelerating too rapidly and throwing themselves into a stall situation," said Harry Nelson, a senior flight-test pilot and manager for Airbus, a unit of European Aeronautic Defense & Space Co. "Certainly, we're getting a lot of queries from our customers" about how to safely conduct flight tests, he added, along with increased focus by regulators.

In late 2007, a new Airbus A340-600 being delivered to Abu Dhabi-based Etihad Airways **crashed into a concrete barrier during routine ground tests** outside the Airbus headquarters in Toulouse, France.

Investigators concluded that an Airbus engineer revved up all four engines to high power at the same time, **but didn't put a chock under the wheels** to prevent them from rolling. When one of the Etihad crew believed the plane was moving, the **engineer assumed** there had been a hydraulic failure.

To clear the problem, the Airbus engineer momentarily released the parking brake, and the plane began accelerating. In seconds, the \$250 million jet smashed into the barrier, shearing off the cockpit and **seriously injuring four people aboard**. The harried engineer never pulled back on the throttles.

These high-profile **mistakes**—plus a third post-maintenance incident involving an EasyJet plane in Britain that plunged about 10,000 feet before

the pilots managed to regain control—prompted Airbus to reassess and tighten internal safety procedures.

At the same time, Airbus has launched its first series of training classes specifically designed to sharpen the flying skills and decision-making abilities of flight-test pilots working for carriers.

The five-day course is intended, in part, **to teach them the hazards** of testing systems at low speeds. The course also deals with how to adjust power, handle the controls and troubleshoot systems while approaching or trying to recover from a stall.

Reflecting a growing concern over unexpected glitches with advanced flight-control computers during unusual maneuvers, Mr. Nelson told the safety conference: "We've all been hijacked by our own cockpits."

He described the tendency of many pilots "to battle with automation and try to get it to work" instead of quickly reverting to manual controls as soon as difficulties crop up.

## **American Eagle, union tout airline's efforts to promote safety**

American Eagle Airlines' management and its union counterpart agree the is **taking big steps to enhance a safety culture** that they feel is among the strongest in the regional industry.

Airline officials and members of the Air Line Pilots Association chapter at Eagle meet monthly on a **fatigue review board**.

Pilots can ask to be taken off a trip they believe they're too tired to fly; the board reviews the circumstances and can remove the fatigue notation from a pilot's attendance record if it agrees with the pilot's call.

That board isn't common in the industry, said Jim Winkley, Eagle vice president of flight operations, and Dave Ryter, vice chairman of Eagle's ALPA master executive council.





"If you're fatigued, you're fatigued, and we're going to take you off that trip," said Winkley, who is also a pilot. "It's not considered a negative against the pilot."

The issue for the fatigue review board is whether the pilot can get paid, Ryter says.

The union wants the airline **to let pilots use accrued sick time to cover fatigue pay.**

"We want our pilots to have the ability to make this decision without worrying about other factors such as whether or not they lose the money," he said.

The fatigue board plus a program that lets pilots self-report unsafe actions by themselves or others have **helped build a safe culture**, Ryter said.

## **Why Business Aircraft Operators Need to be Thinking About SMS Now**

Part 135 certificate holders need to begin taking advantage of the benefits of next-generation, closed-loop safety and compliance processes. These processes improve safety systems oversight, risk management, and regulatory reporting for compliance. Operators also benefit from improved fleet availability and dispatch reliability leading to increased profitability. Implementing next-generation, closed-loop systems will pay for itself and support the SMS mandate when it arrives. So, the question many Part 135 operators have to answer is, why wait?



**SMS is coming to Part 135 operators as early as 2012**, according to ATP, a Qualified Certification Consultancy listed on the FAA website. It is already an ICAO mandate, and Advanced Notice for Proposed Rule Making (ANPRM) has been registered. Under **FAA Advisory Circular AC 120-92**, a set of risk management guidelines consistent with the ICAO regulations was published for Part 135 operators.

As guidelines they do not have the force of law. However, in the wake of some high profile accidents involving chartered business jets, the FAA has come to recognize that the safety infrastructure at many Part 135 carriers, while generally safe, is not as institutionalized as necessary. As a result, compliance, safety and training programs are under increased scrutiny.

“Any FAA inspector will tell you that SMS is coming to business operators, so the sooner they choose to implement modern compliance and safety processes into their operations the better,” said Bob Trevelyan, Vice President of Sales and Marketing at ATP. “It’s better **to be proactive** and implement these processes prior to the mandate so you can take the time to understand how the changes effect your operation and immediately begin to take advantage of the efficiencies they produce,” continued Mr. Trevelyan.

Implementing a next-generation, closed-loop compliance and safety environment has real benefits including:

- **Safety and Risk Management** – reduces risk and predicts failure. SMS processes have proven to be an indispensable tool for reducing accidents.
- **Compliance** – improved insight into risk management and better regulatory compliance reporting.
- **Return on Investment** – proven way to save money and improve efficiency, fleet availability and dispatch reliability. It makes good business sense to begin implementing SMS processes today.

**SMS** is still confusing to many operators. A large part of the challenge is that the FAA has simply not finalized the SMS rule yet. That said; there are principles to SMS that can be implemented today to build next-generation processes and create the foundation for SMS when it is finalized. **These principles include:**

1. Next generation documentation processes
2. Realistic and concrete safety measurement metrics
3. Closed-loop evaluation processes
4. Controlled change management processes
5. Real-time regulatory validation and communication processes
6. Extensive training on how a safety culture works
7. Dedicated management to a safety culture

## **FAA Updates Certification Rules for Aviation Products and Parts**

Revisions For 14 CFR Parts 1, 21, 43, And 45 The Federal Aviation (FAA) has **published new regulations** for manufacturers of aircraft and aviation products that will update and standardize FAA requirements to better align them with the current global manufacturing environment.



“We want to make sure that all aircraft and parts designed for them **meet the highest standards** no matter where they are manufactured or who makes them,” said FAA Administrator Randy Babbitt. “These changes to our certification rules will help us do that.”

The aircraft manufacturing industry has evolved significantly over the past several decades. The FAA first issued most of its certification rules in 1964, when a typical business model involved many aircraft manufacturers with relatively few suppliers. Today, there are fewer manufacturers, but the number of suppliers has increased. **Many of those suppliers are located outside the United States** and build much larger portions of the aircraft than in earlier years.

The major changes to the regulations include:

Standardization of quality control system requirements for all aviation manufacturers.

Updated export requirements to facilitate global acceptance and documentation of parts.

Standardization of part marking and identification requirements so they align with other countries’ rules, and consolidation of the requirements into one regulation.

Updated and standardized language in the regulations for production approvals, exporting and identification marking

The final rule is published in the Federal Register:

<http://edocket.access.gpo.gov/2009/E9-24821.htm>



## 2010 CHC Safety & Quality Summit in Vancouver, BC: Registration Now Open

CHC Helicopter has announced the opening of registration for the CHC **and Quality Summit**, being held in Vancouver from March 22 – 24, 2010 and has declared early-bird pricing until the end of 2009.

The non-profit Safety and Quality Summit attracts the **best and brightest aviation experts** from around the globe to share best practices and explore the latest in Safety Management Systems and **human factors** of safety. The theme of the 3 day event is “Discipline in Aviation: **Professionalism in Flight Operations and Maintenance**”.

Beyond the wide range of presentations conducted during the Summit, delegates will have the opportunity to attend additional courses before and after the event, including an internal auditor's course and a day focused on Flight Data Monitoring.

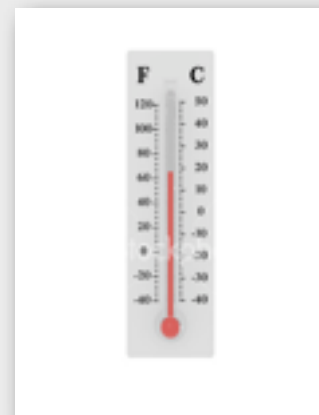


For more information about the Summit, email [summit@chc.ca](mailto:summit@chc.ca). Online registration is available through [www.chcsafetyqualitysummit.com](http://www.chcsafetyqualitysummit.com).

## Best Temperature for Sleep

Studies have found that the **optimal temperature** for sleep is around 60 to degrees Fahrenheit (15.5 to 20 degrees Celsius.) When temperatures fall to far below or above this range, many people experience.

Furthermore, a growing number of studies are finding that temperature regulation plays a role in many cases of chronic insomnia. For example, many insomniacs have warmer core body temperatures than normal sleeper just before bed.





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