

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

★Company fined over aircraft engineer's death

★AirEvac Helicopter Crash Injures Mechanic at West Plains Airport

★FAA Proposes \$395,850 Civil Penalty against US Airways

★Airbus A380 wing flaw undetected for a decade

★Hasty taxi for take-off led Air Berlin 737 to exit runway

★An appreciation of aviation safety trends

★New Pilot Deviation Rules Surprise Pilots

Company fined over aircraft engineer's death

A subsidiary of Air New Zealand has been fined \$56,250 after one of its employees [died after being sucked into a plane engine](#).

Safe Air Limited, which specializes in aviation maintenance and repair, was also ordered to pay reparation of \$22,500 following the incident on August 8, 2011.

The Blenheim District Court heard that two employees were servicing an engine at Woodbourne Airfield. The engine being serviced was mounted on a testing site and [was accessible from an elevated work platform](#). With one employee at the computer in the control room, Miles Hunter, 51 went outside to check the engine. To access the right hand side he had to walk in front of the engine, past the air intake.



"When the employee maneuvered in front of the engine [he wasn't holding onto the handrail around the edge of the platform](#) and was pulled into the engine," said Department of Labour spokeswoman Jean Martin.

"While the company had identified airflow from an engine as a hazard, tragically the procedure they put in place to minimize this [was not fully effective](#).

"A handrail around the edge of the platform wasn't a sufficient measure against the hazard. A proper guard to prevent anyone from getting dangerously close to the engine should have been in place, and might well have prevented this tragic accident."

Safe Air spokeswoman Heather Deacon said she supports the findings of the court made today.

"The fact that Miles, a valued employee and colleague died at work tragically highlights that [our training, systems, processes and policies were insufficient to fully protect](#) him from this danger," she said.

Ms Deacon said the tragic loss of Mr Hunter was unacceptable and this led to the company's immediate guilty plea.

"Having lost a respected colleague that day, and following a full review of the causes of the accident, [we set about improving our systems](#), training, practices and procedures to ensure such a tragedy could never occur again."

She said the tragedy was Safe Air's first workplace fatality, "and I would certainly like it to be our last, as we continue in our efforts to continually improve the safety of the work environment for our staff".

Mr Hunter had joined Safe Air in 2005, but [had been around machines and engines his whole working life](#).

He had previously been a motorcycle mechanic and put himself through the Nelson Marlborough Institute of Technology (NMIT) to prepare for a career at Safe Air.

"Our thoughts continue to be with the family, friends and work colleagues of Miles and to that end we have set up a memorial scholarship through NMIT dedicated to Miles to ensure [we all continue to be reminded of the learnings](#) from this tragedy."

At the time of the incident an Air NZ spokeswoman said the Rolls Royce C-130 Hercules turboprop engine was being tested [without its propellers](#) on a remote stand.

A turboprop engine is a combination of a jet engine with a propeller on the front, she said.

AirEvac Helicopter Crash Injures Mechanic at West Plains Airport

An Air Evac Lifeteam air medical helicopter crashed into a hangar at the West Plains Regional Airport Wednesday.

It happened around 4:45 p.m. at the airport at 4523 County Road 2340.

["It got hung up on one of the hangars,"](#) said Pomona Fire Chief Leon Brown just minutes after the crash. It was originally thought that a pilot was injured, but it was in fact a mechanic who suffered minor injuries. The mechanic was taken to Ozarks Medical Center for evaluation.



"The aircraft had just completed a routine inspection and the mechanic was doing a post-inspection ground run when the aircraft inadvertently lifted from its stationary position and struck a hangar," said Julie Heavrin, Public Relations Manager for the Air Evac Lifeteam, in a statement.

Heavrin says officials with the FAA and National Transportation Safety Board (NTSB) have been notified and will begin a formal investigation of the incident.

Air Evac Lifeteam, operated by Air Evac EMS, Inc., is the largest independently owned air medical provider in the United States. The company, based in West Plains, operates 107 bases in 15 states throughout the central United States.

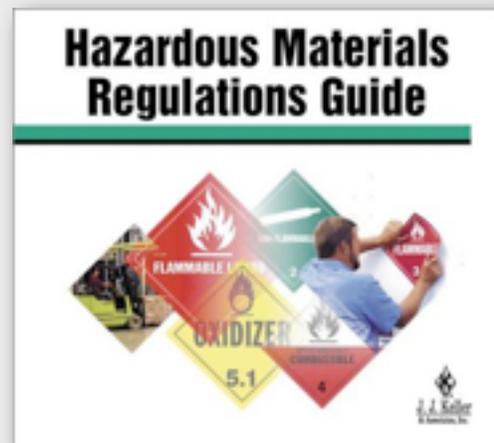
The airport is owned and operated by the City of West Plains.

FAA Proposes \$395,850 Civil Penalty against US Airways

The FAA is proposing a \$395,850 civil penalty against US Airways, for allegedly violating U.S. Department of Transportation Hazardous Materials Regulations.

As the result of a inspection of the airline's facilities at Hartford Bradley Airport (BDL) from May 10 to 18, the FAA alleges the airline committed various violations between February 26 and May 12, 2010, involving 12 flights to or from Bradley. In one instance, the TSA discovered undeclared cigarette lighters in checked baggage, while another incident involved improperly packaged alkali batteries being loaded onboard.

The FAA also alleged the airline failed to provide pilots with the required "accurate and legible written information" regarding 23 shipments of hazardous materials it accepted for transportation.



Airbus A380 wing flaw undetected for a decade

Airbus said efforts to lower the weight of the world's largest airliner lay behind recent A380 wing cracks and pledged [to learn from mistakes that lay dormant for a decade](#), as repair costs looked set to climb towards 500 million euros.

EADS subsidiary Airbus reported the cracks in January, leading to checks on the worldwide fleet of A380s, which authorities say are safe to fly.

Airbus Chief Executive Tom Enders said the discovery inside the superjumbo's wings, where new lightweight carbon-composite materials and traditional metal meet, showed the [difficulty of pushing technical boundaries](#) in the ultra-competitive industry. "Certainly when it was designed some 10 years ago, it was an innovation. We thought it was a great idea to make wings lighter with a hybrid (of) carbon-fibre ribs and metal ribs. It was supposed to bring a lot of weight reduction, and to a certain extent it did," Enders told a group of aviation journalists.

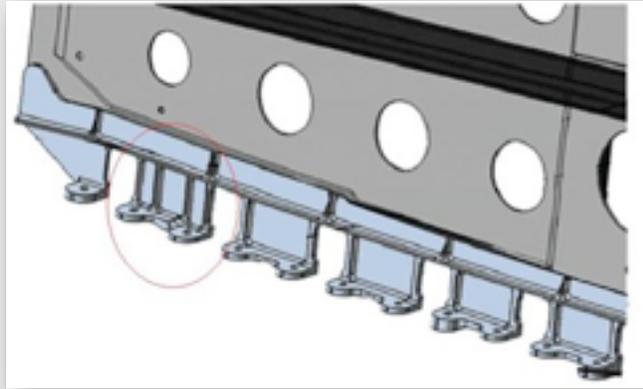
The A380 was designed in the early part of the last decade. At the time, the aircraft needed to lose weight, in part because of efforts to make it quieter, which required larger and heavier engine fans.

To drive down weight, a decision was made to mix metal and lightweight carbon components inside the wings, but engineers could not tell how this would stand up to extreme temperatures.

"We were confident at the time that we had mastered the technology, that we were selecting the right materials (and) understood their properties and the interface between carbon fibre and metal," Enders said.

"We found out the hard way that [we didn't know everything we should have](#) before taking this decision."

The willingness to tackle the issue head-on in his last major media appearance before stepping up to chief executive of parent EADS later this month, contrasts with the industry's usually conservative tone and marks efforts to draw a line under a damaging episode for the world's largest civil planemaker.



People familiar with the matter said EADS and two groups of auditors had been brought in to assist with an investigation which Enders launched in February. Airbus will also be looking for certainty that similar problems could not crop up elsewhere.

NEW TECHNOLOGY

The upheaval comes at a time when Airbus and rival Boeing are investing billions of dollars in a more radical technological leap towards new lightweight aircraft such as the Boeing 787 Dreamliner and the future A350.

Boeing was hit with composite-related fuselage problems on its 787 Dreamliner and had a potentially serious fire on a 787 test flight.

Both the 787 and A380 have been declared airworthy but authorities have ordered a tighter timetable of regular checks on the A380 until a permanent fix is introduced.

A350 program head Didier Evrard said extra fatigue tests would be carried out on the company's future A350 test planes during development.

The A380 cracks were found in L-shaped components called rib feet, which connect the wing's skeleton to the outer skin. Airbus said it had decided to change the type of aluminum alloy used for the parts to one less brittle.

It takes a year for completely fresh wings to work through the production system, and it will not be before 2014 that entirely fresh aircraft will start rolling off assembly lines.

Meanwhile, [the cost of the mistakes made a decade ago](#) under a mainly different management team appears to be rising.

Airbus officials said they were confident the A380 would overcome the problems, and sales chief John Leahy reiterated plans to sell 30 superjumbos in 2012.

Hasty taxi for take-off led Air Berlin 737 to exit runway

Excessive taxiing speed and [disregard for standard procedures](#) caused an Air Berlin Boeing 737-800 (D-ABKA) to slide off the runway during line-up in snowy conditions at Nuremberg airport in January 2010.

German air accident investigation bureau BFU determined that the pilots attempted a rolling take-off even though the manufacturer's manual [did not permit](#) such maneuvers in the prevailing subzero temperatures.

None of the 125 passengers and six crew members was injured during the serious incident, but the aircraft sustained minor damage.

During taxi, the tower had instructed the pilots to line up on runway 10 and, seconds later, issued take-off clearance. When the aircraft entered the runway at 12kt (22km/h)

ground speed, it needed to make an 80° right turn. But Air Berlin's operating manual mandates pilots to make turns greater than 75° at a maximum speed of 10kt.

The surface was covered with a [thin layer of snow](#), and the pilots had been informed of "medium" braking action. While turning onto the runway, the pilot advanced the throttles to around 43% N1 even though Boeing stipulates to do so only once lined up.

The accelerating aircraft crossed the runway centerline with both main landing-gear, with the pilot trying to return to the middle by steering the nose wheel right. This caused the 737 to veer to a maximum 120° heading, traveling at up to 19kt.

The pilot then tried to steer to the left but the aircraft no longer responded. He reduced the throttle to idle and the aircraft came to a stop 150m (490ft) from the runway threshold, with the nose and right main wheels sunk into the ground.

BFU concluded that "due to the recorded speeds and early thrust increase on the snow-covered ground, the crew [had to anticipate](#) that the aircraft could potentially slide".



[An appreciation of aviation safety trends](#)

A Thumbs Up for Human Factors Education.

2011 was a 'good year' and, in fact, from the point of view of airline fatal accident and passenger fatality rates, [was the safest year ever](#).

Worldwide in 2011 there were 25 fatal airline accidents giving a fatal accident rate of one per 1.52 million flights, a 17% improvement over the one per 1.3 million flights achieved in 2010.

However, comparing single years is meaningless – obviously the world’s airlines did not suddenly become almost 20% safer between 2010 and 2011 although, hopefully, the long-term, on-going gradual improvement in safety did continue last year.

The fatal accident rate has halved in the last 20 years, simplistically suggesting an average 5% per year improvement in safety over the period although, of course, this improvement, as demonstrated by changes in the fatal accident rate, has not been smooth. There have been both ‘good’ and ‘bad’ years but it should be remembered that, fortunately, fatal accidents are rare and just one fatal accident more or less in a year will result in a 5% improvement or worsening of the rate.



Airline accidents are news and the random distribution in timing of crashes means that, occasionally, a number will come together in a short period of time ('disasters come in threes') giving rise to headlines such as 'Why are all these aircraft falling out of the sky?' A 'string' of accidents does not mean that safety has suddenly become worse but this is probably the impression the public gets.

To help put air safety trends into perspective; Flightglobal Ascend is launching a new series of safety reports, which will analyse accident frequency and accident rates for different classes of aircraft and different areas of the world. The first two of these special reports, giving an overview of airline and business aircraft accident rates are now available for download using the links below:

http://forms.flightglobal.com/content/FGX0051_AirlineSafetyLossesAnnualReview2011

http://forms.flightglobal.com/content/FGX0055_BusinessAviationSafetyLossesreport

New Pilot Deviation Rules Surprise Pilots

The Airline Pilots Association is advising members (PDF) to voluntarily report to the [FAA Aviation Safety Action Program](#) even the most minor deviation from ATC instructions, regardless of their origin (i.e. equipment failure or even weather deviations) or risk being written up for a pilot deviation (PD). Although airline pilots are more likely to run afoul of a new FAA internal reporting policy for deviations, it applies to all aircraft under active control and the consequences can include FAA enforcement and a note on a pilot's permanent record. While the intent of the policy shift appears to be to encourage pilots to self report deviations (doing so triggers enforcement "incentives" that reduce the consequences) ALPA says pilots who have been assured by controllers that the transgression is a minor one not worthy of FAA attention have found out later that they've been written up. In one case, according to ALPA, a Delta crew departing Atlanta on autopilot went off track briefly when the autopilot disconnected. They flew manually to the correct track and were assured by the controller that it was "no problem." Under the new rules, however, that controller was required to report the incident and it was forwarded to a "quality assurance 'clearing house'" which ultimately decided if an enforceable pilot deviation occurred. In that spirit, ALPA has essentially invited its pilots to flood the system with reports. "Any safety-related event, any slight deviation from clearance, even if not noted by ATC, should be documented via ASAP," ALPA advised its members. "Again, if in doubt, file. If you have doubt, and that doubt is somehow dispelled later, file anyway! Do not let assurances from ATC convince you that an ASAP report is somehow unnecessary." It's recommending that all members of the cockpit crew file the reports and that they also consider filing one to the [NASA Aerospace Safety Advisory Program \(also acronym ASAP\)](#) whose mandate is to collect air safety data rather than mitigate enforcement action.



http://www.avweb.com/pdf/alpa_asap-reporting_no-problem.pdf

<http://oair.hq.nasa.gov/asap/>