

Aviation Human Factors Industry News

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

Hello all,

To subscribe send an email to: rhughes@humanfactors.edu

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

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★Virgin Blue wheel problem blamed on axle corrosion

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NEW

The "NEW" Maintenance Dirty Dozen Posters are HERE

The Dirty Dozen Posters were originally designed to help keep the of Human Factors up and of course to help provide "Safety Nets" to prevent accidents. If your company needs to bring awareness up then these posters are an excellent way to do just that.

"Dirty Dozen"

to prevent accidents. If your

http://www.system-safety.com/ourservices/maintenance_posters.htm

Unsecured Cowling Detaches and Hits tail

Cessna citation 560I. substantial damage. no injuries.

The flight crew was conducting a ferry flight from Bournemouth, England, **maintenance had been performed**, to Biggin Hill the evening of June 29, 2008. While climbing through 7,000 ft, the crew heard a rumble and a thud at the rear of the aircraft, the AAIB report said.



“Due to a vibration in the control column, the autopilot was disconnected and a check of the flight controls was carried out,” the report said. “No abnormalities were noted.” The crew said “ we heard the rumble and thud again while descending through 3,000 ft but were able to land the Citation without further incident. “After shutdown, an inspection of the aircraft revealed that approximately 75 percent of the left engine upper cowling **had separated** from the aircraft, damaging the leading edge of the fin and left elevator,” the report said.

Investigators found that a maintenance technician had been **interrupted** while he was reinstalling the cowling. “This caused him to descend from the engine, but he had no recollection of climbing back up to the engine to secure the inboard fasteners,” the report said. “A further ‘panel re-fitment inspection’ and a ‘post- maintenance safety check’ **failed** to identify that the inboard leading edge cowling fasteners had not been secured.”

Virgin Blue wheel problem blamed on axle corrosion

A **corroded axle** is being blamed for a nose wheel coming off a Virgin Blue plane as it taxied at Melbourne Airport last month. The aircraft was at the end of the runway when a **ground engineer** noticed one of the wheels had fallen off. The crew were apparently unaware of the problem.

Virgin Blue chief executive Brett Godfrey today rejected claims from aircraft engineers that the fault would have been picked up in an overnight pre-flight safety check.

“In a nutshell, that type of issue with the nose wheel would not have been found on a general inspection,” he said. “You have to take the wheel off, you have to get access to the axle.”

“It was an actual axle shear and the early indications were that it was corrosion. If that turns out to be case, you typically find corrosion of that magnitude when major checks, basically when the aircraft is stripped down.”

Mr Godfrey said the aircraft would have still functioned with one wheel and he believed the airline’s **safety management system** exceeded required standards.

He said the aircraft had been overhauled by Lufthansa Technik about 12 months ago and this sort of problem was rare.

The airline had inspected all aircraft around the same age and with a similar number of landing and take-off cycles and there were no signs of cracks, corrosion or fatigue.



“At this early stage, we think it was an anomaly,” he said.

Australian Licensed Aircraft Engineers Association federal secretary Steve Purvinas had earlier said the nose wheel fault could have caused serious problems.

Mr Purvinas said Virgin Blue checked its planes every day, but not always before each flight.

"We say that **there would have been some tell-tale signs** here that this wheel was ready to give way and unfortunately it wasn't picked up," he said.

The Australian Transport Safety Bureau is investigating.

A Case of Miscommunication?

Miscommunication between mechanics may have caused the landing-gear collapse that severely damaged an American Airlines jumbo jet in Fort Worth, airline sources and federal officials said. NBCDFW.com first reported the incident last week, after obtaining pictures from the scene at Alliance Airport. The photos show a Boeing 767 on its nose after the front landing gear folded up, dumping the plane onto the ground.



It now appears that mechanics in the cockpit pulled the lever that retracts the landing gear, **not realizing** that other mechanics failed to put a pin in the gear to prevent it from actually retracting while the plane was on the ground.

The damage was so bad, it prompted the union that represents American's pilots to issue a statement to its members, saying the plane, "may not be repairable."

Mechanic Errors May be to Blame for Jet Oops

But the airline denied that claim. A company spokesman said the airline consulted with a team of experts from Boeing and now believes the plane can be fixed. He described the damage as "extensive" but would not say how much repairs would cost.

The FAA plans to **monitor the repairs** to ensure that the plane is safe to fly.

Denny Kelly, a veteran aviation safety consultant, described the incident as extremely embarrassing for the airline.

He said employees may lose their jobs over it.

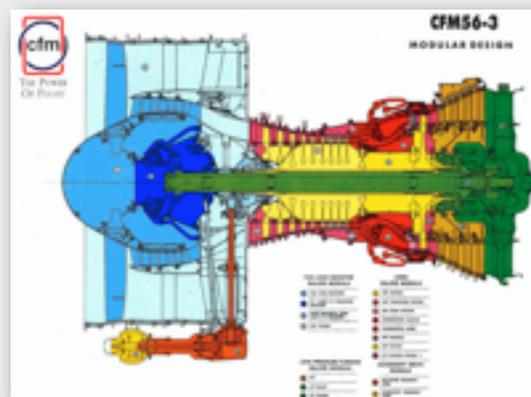
"You're dealing with human beings, and **humans make mistakes**, it's just that simple," he said.



EASA alerts A320 operators of CFM56 anomaly

EASA last week issued a safety information bulletin alerting operators of CFM56-5A turbofan engines of an **unexplained anomaly** that on 30 June caused an aircraft on departure to return to the airport. CFM says there are more than 1,100 of the engines in service, built specifically for the A320 series aircraft, with a cumulative total of 32 million flight hours and dispatch reliability of more than 99.9%.

According to the EASA report, the engine in question during takeoff experienced a stall and in-flight shutdown with an accompanying exhaust gas temperature (EGT) over limit and high vibrations.



Mechanics conducting a borescope inspection after the incident found that the engine's low-pressure turbine (LPT) section had been damaged, with several blades broken off. The engine had accumulated 39,808h and 30,980 cycles since new but only 21h and 15 cycles since its last shop visit.

EASA did not report which airline or maintenance shop was involved.

Upon disassembly, a preliminary examination of the LPT and high-pressure turbine (HPT) revealed overheating, suggesting a "cooling deficiency by hot gas ingestion into the turbine rotor air cooling system", says EASA. "The cause of this overheat condition has not yet been identified."

The disk, identified as the LPT stage 1 disk, had fractured with "one full radial separation", says EASA. "The disk remained in one piece, expanded but fully contained."

EASA, FAA and CFM continue to investigate the maintenance shop that performed the most recent work, and the airline involved. "This investigation will determine whether any recommendations or mandatory actions are necessary."

CFM could not be immediately reached for comment.

NTSB Releases Expanded Colgan CVR Transcript

The NTSB released an 111-page expanded transcript of the cockpit voice from Continental Connection Flight 3407 (a.k.a. Colgan Air) which crashed February 12, in Clarence Center New York, killing all 49 aboard and one on the ground. The newly released information is factual and "does not provide analysis or the probable cause of the accident," according to the NTSB, but **may certainly stimulate speculation**. Flight 3407 went down in icing conditions after the aircraft stalled and failed to recover while on approach to Buffalo.



http://www.avweb.com/avwebflash/news/NTSBLooksForLessonsInColganDash8Crash_200369-1.html

Crash Diagram (PDF)

http://www.avweb.com/pdf/colgan_crash-diagram.pdf

Extended CVR Transcript (PDF)

http://www.avweb.com/pdf/colgan_extended-cvr-transcript.pdf

Report Faults Air France's Safety Record

Industry figures show Air France has suffered crashes in its **Airbus fleet** at **four times** the average rate, raising questions about its **safety culture**. The crash of Air France flight 447 in the Atlantic Ocean on June 1 claimed 288 lives and caused a public relations disaster for the French airline. Now new information is raising disturbing questions about the airline's safety record.



Spiegel has learned of secret aviation industry calculations which conclude that Air France's Airbus fleet has an aircraft loss rate of 1.26 per 1 million flights, That is **four times higher** than other airlines' average (0.3 losses per million flights).

Three Air France (AIRF.PA) Airbus jets have crashed since 1988. A fourth Airbus jet belonging to Air France's later subsidiary Air Inter also crashed.

The new figures coincide with a debate in France about whether the crash of the Airbus A330, flying from Rio de Janeiro to Paris in which all 288 people aboard were killed, resulted in part from reckless behavior by the pilots.

In an interview with Le Figaro, Air France CEO Pierre-Henri Gourgeon countered speculation that the pilots had headed straight into a thunderstorm because they wanted to save fuel or to avoid a delay.

An internal report from 2006, which has been obtained by Spiegel, had

complained about a **deficient culture of safety at the airline**. The report said the company lacked "a clear and objective view of performance in the area of flight safety."

According to the report, eight out of 10 accidents or incidents at Air France resulted from **human factors**—such as a lack of attention, poor decision-making processes and mistakes in co-operation between pilot and co-pilot.

It added that an analysis of incidents with A330/340 models indicated that pilots show "a certain **degree of overconfidence** or even **complacency**." Air France says it has rectified all shortcomings since the report was presented in June 2006.

The airline responded to the safety statistics by quoting figures from the International Air Transport Association (IATA) which include all of Air France's aircraft types. These statistics show an average safety record for the company even after the recent accident, an Air France spokesperson pointed out.

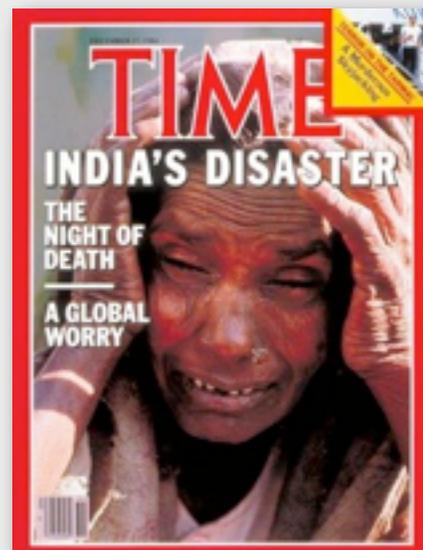
Jean-Cyril Spinetta, chairman of the Air France/KLM group, conceded at a shareholder meeting recently that the airline had a **poor safety record**. "We must find out how that could have happened," he said.

Haunted by chemical disaster

A midnight shift occurrence

The former head of the chemical company **responsible** for the gas leak that killed 10,000 people in India 25 years ago has been **"haunted"** for years by the world's worst industrial disaster, his wife said Saturday.

An Indian court issued a warrant Friday for Warren Anderson, the former head of Union Carbide Corp., **for the leak of 40 tons of poisonous gas** that killed 10,000 people in Bhopal. Anderson was arrested just after the disaster in the central Indian city but quickly left the country.



U.S. authorities have not moved to extradite him and he has maintained homes in Florida, Connecticut and in Long Island's Hamptons.

His wife, Lillian, answered the door Saturday at the couple's modest yellow farmhouse with a white picket fence, and silver Cadillac parked in the driveway. Her husband **is 89 and in poor health**, she said.

"We covered everything way back when," she said. "He's **been haunted** for many years" by the accident.

Lillian Anderson wasn't aware of the new arrest warrant and said, "It's probably some political thing." She said her husband wasn't at home.

"When you get to be 87 or 85 years old **you just don't remember anything**. You try to put bad things out of your mind," she said.

Anderson was the chief executive of Union Carbide, now owned by Midland, Mich.-based Dow Chemical Co., when the deadly gas cloud leaked from its Bhopal factory on Dec. 3, 1984.

More than **555,000 people** who survived the initial disaster are thought to have suffered after effects, though the exact number of victims has never been determined. Many have died over the years from gas-related illnesses, like lung cancer, kidney failure and liver disease.

On Friday, in response to a recent appeal by a victims' group, Prakash Mohan Tiwari ordered the arrest of Anderson. Tiwari, Bhopal's chief judicial magistrate, also ordered the federal government to press Washington for the American's extradition.

India's government as of Saturday had not acted on the court's request to seek his extradition.

Foreign governments typically notify the State Department through their U.S. embassies when extradition is requested of an American citizen and the request is reviewed by the Justice Department.

A message left at the Indian Embassy in Washington was not immediately returned Saturday. State Department spokeswoman Megan Mattson said Saturday she is not aware of an extradition or arrest request from India or the embassy.

Messages left for Union Carbide representatives weren't immediately returned Saturday.

In 1989, Union Carbide **paid \$470 million** in compensation to the Indian government and said officials were responsible for the cleanup. Victims

accuse New Delhi of delaying distribution of the funds.

Lillian Anderson said her husband has been unfairly targeted.

"Every time somebody wanted to sue the company there would be some kind of a thing that happened and they would be chasing after Warren, following him to the dump with our trash," she said.

"This is 25 years of unfair treatment, before CEOs were paid what they're paid today."

Airline Employees Living at the Airport

It's a sign of the times. In this tough economy, the airline industry is among the hit and now some of its employees are finding a new way to save -- **they're living at the airport.**

Parking Lot B at Los Angeles International Airport (LAX) has become the newest symbol of America's shaky airline economy. That's where you'll find people living in trailers and motor homes.

They aren't unemployed though. They're **pilots, mechanics and flight attendants** who choose to live at the airport where they can walk to work instead of commuting from far away cities or sharing an apartment with multiple roommates.

"It is not that nice living in a parking lot. You get the smell of burnt rubber when the wind blows, it is always noisy and it is hot," said **airline mechanic** Steve Krebs.

For some, however, it's better than the alternative.

"Well the bed is mine and it is clean versus what we refer to as **hot racking** -- the first one gets the bed and eventually you either end up on the floor or in a chair," said pilot David Hunt.

Since Sept. 11, 2001, **13 U.S. airlines** have filed for bankruptcy. Most emerged leaner, with lower pay and fewer employees, forcing the remaining staff to



relocate or commute to keep their jobs.

Sue Young, the wife of an airline mechanic, said she and her husband are lucky because LAX is **the only major airport to offer this option to airline employees** -- a gated community, 24/7 police patrols and a shuttle that picks you up at any hour of the day -- all for just \$60 a month.

"My husband and I would have to live separately and we'd maybe see one another on his days off, which would be one or two a week," Young said.

"We have all the necessities we need -- water, a stove -- it's just like living at home except we live at the airport," Young added.

Ground Accident Prevention

Leadership Tip Sheets

The **leadership tip sheets** are one-page briefings designed to be presented to senior managers to heighten their awareness of the **ramp safety** problem and its effect on the organization's operations and economic performance.

The first tip sheet includes a series of questions that senior managers **should ask their staff** about what is being done to prevent ramp accidents.

"The important concept here is that you show interest in ramp safety," the tip sheet says. "A few simple questions posed by senior management can go a long way **in preventing ground accidents.**"

The other tip sheets discuss the development of a company **safety policy** that emphasizes management's commitment to safety; the importance of including ramp operations in the company's **safety management system (SMS)**; roles and responsibilities of senior managers, line managers and employees in an effective SMS; and the development and use of **ramp safety performance metrics.**



Leadership Tip Sheet 1 — Questions That Show Your Commitment to Ramp Safety 1 page. [PDF 58K] http://www.flightsafety.org/pdf/gap/gap_tip_sheet-1.pdf

Leadership Tip Sheet 2 — Safety Policy Development 1 page. [PDF 41K]

http://www.flightsafety.org/pdf/gap/gap_tip_sheet-2.pdf

**Leadership Tip Sheet 3 — Safety Management Systems for Ramp Operators
1 page. [PDF 56K]**

http://www.flightsafety.org/pdf/gap/gap_tip_sheet-3.pdf

**Leadership Tip Sheet 4 — Roles and Responsibilities in a Safety
Management System 1 page. [PDF 49K]**

http://www.flightsafety.org/pdf/gap/gap_tip_sheet-4.pdf

**Leadership Tip Sheet 5 — Developing Ramp Safety Performance Metrics 1
page. [PDF 52K]**

http://www.flightsafety.org/pdf/gap/gap_tip_sheet-5.pdf