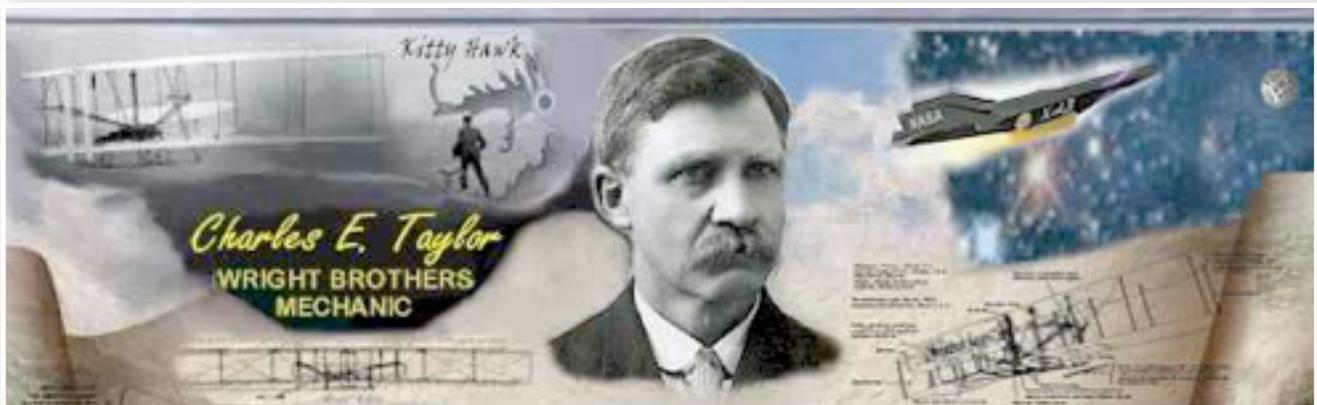


Aviation Human Factors Industry News

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

Hello all,

To subscribe send an email to: rhughes@humanfactorsedu.com

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

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★Finland issues report on two A330 engine bleed air system failure incidents

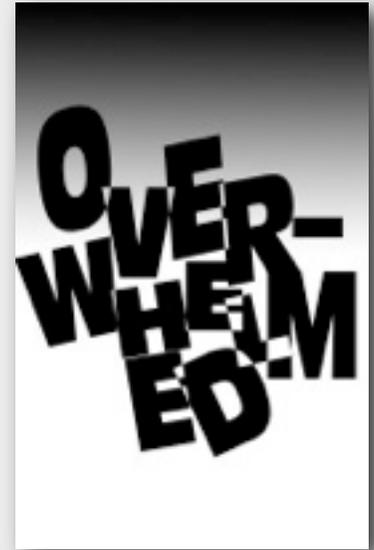
★Investigators Say Boy, Age 6, May Have Pulled Landing Gear Lever As Plane Touched Down

★ASRS reports sought for safety studies

Engine Part Failure, Airbus Crew Distraction

Investigators have made progress toward explaining the failure of a Boeing 787 Dreamliner GENx engine during a taxi test and a separate incident that many pilots might understand involving the crew of an A380 out of LAX. The 787 incident took place July 28 at Charleston, S.C., and resulted in a contained engine failure. The NTSB has found that a fan located mid-shaft on the 787's GENx engine fractured. Detailed metallurgical and dimensional analysis of the parts is ongoing. Meanwhile, ATSB investigators found that [complications and interruptions introduced into the cockpit](#) of an A380 as the crew prepared for takeoff last October ultimately left them without automated lift-off target speeds during the takeoff roll.

The ATSB found that the A380 crew [had been asked](#) to make a late runway change and while the captain prepared to enter the data into appropriate systems, the [cabin crew called](#) to report a problem with one of the jet's doors. As a result, the captain [failed to follow all appropriate data entry procedures](#) relevant to the change of runway and wind information, when his attention was [diverted](#) by the door problem. The first officer [had two opportunities to catch the error](#) and dismissed a first alert thinking the information would later be checked. Then he dismissed the second, believing the information had already been checked, the Sydney Morning Herald reported. As the aircraft accelerated down the runway, the crew became aware of the lack of lift-off target speed information present in their instrumentation but initially thought it was the result of another system failure. But as the jet accelerated through 100 knots the captain made the decision to continue and the cockpit crew [fell back on "handwritten notes](#) to recall liftoff target speeds," the Herald reported. The flight continued to a safe landing in Melbourne without additional drama.



'We know about this' written on damaged aircraft wing

Running the day-to-day operation of an airline isn't easy to do. With thousands of employees and passengers and hundreds of planes it might be hard to get a message to one person in particular. So, what's an aircraft maintenance worker to do if they want to let the flight crew know that they're aware of trim repair needed to the corner flap of the right wing? Aside from email, calling or even walking up to the flight deck, [they decided to write a message on the wing.](#)



A passenger on an [Alaska Airlines](#) flight bound to Seattle looked out the window and saw what appeared to be a damaged area on the wing with a handwritten note saying, "[We know about this.](#)"

The incident July 28 sparked comments on Twitter and other social media websites.

Spokeswoman Bobbie Egan said Tuesday that [there was nothing to worry](#) about and that a maintenance technician wrote to let the flight crew know.

Egan says, "The message was the result of someone's good intentions" but the wing note "was not appropriate and did not follow company procedures."

The message was immediately removed, and Alaska apologizes for any alarm it may have caused.

FAA Proposes \$1 Million Civil Penalty Against Horizon Air

The Federal Aviation Administration (FAA) has proposed a civil penalty of \$1,005,000 against Horizon Air of Seattle, [for allegedly](#) operating 22 Bombardier DHC-8-402 turboprop airliners on more than 186,000 revenue flights when they were not in compliance with Federal Aviation Regulations. The FAA alleges that Horizon installed new security flight deck doors on the airplanes [using blind rivets instead of the required solid rivets](#), and that the airline operated the 22 aircraft on 186,189 revenue passenger flights between Dec. 1, 2007, and June 1, 2011, before replacing the rivets.



The FAA also alleges the airline, even after being told the aircraft were not in compliance, operated one of the aircraft on another 22 passenger-carrying revenue flights before replacing the rivets. [The installation of blind rivets can damage other components, including wiring.](#)

“We expect airlines to comply with all of our safety regulations and to correct safety defects promptly,” said U.S. Transportation Secretary Ray LaHood.

The FAA discovered the alleged violations when Horizon incorrectly modified a 23rd aircraft with blind rivets, and the plane experienced an [in-flight wiring damage incident during a non-revenue flight](#).

Horizon has 30 days from receipt of the FAA’s notice of proposed civil penalty to respond to the agency.

Silver Airways flight lands at wrong W.Va. airport in 1st week of service; no one injured

A Silver Airways pilot making one of the Florida airline's [first flights](#) to the North Central West Virginia Airport in Bridgeport [mistakenly](#) landed his Saab 340 at a tiny airport in Fairmont, but officials said Wednesday that no one was injured.

"Obviously, it was a mistake," said Jake Wilburn, manager of the Fairmont Municipal Airport-Frankman Field, which is less than 5 miles by air from the Bridgeport airport.

The No. 5 runway at Fairmont is just under 3,200 feet long and 75 feet wide. According to Silver's website, its Saab aircraft have a wingspan of about 70 feet wide and carry 34 passengers.



The landing occurred late Tuesday night during Silver's first week of service to the Bridgeport airport.

"It was a normal landing, if you can say landing a Saab 340 here is normal," Wilburn said. "He got it in, no problem."

Passengers were taken by taxi to Bridgeport.

Wilburn said the incident is under investigation, but he couldn't comment further.

Qantas pilot fails alcohol test

Qantas Airways has launched an investigation after one of its pilots was removed from the controls of a passenger aircraft **just minutes before take-off** due to concerns she had been drinking. The female captain, who subsequently failed an alcohol test, was suspended following the incident last week on a Boeing 767-300 jet that had been about to fly from Sydney to Brisbane.



"A Qantas captain was withheld from service for administrative reasons," said an airline spokesman. "The matter is being investigated and it would be inappropriate to comment further."

The Sydney Morning Herald reported that the pilot was ordered off the plane as it began taxi-ing towards the runway. [Cabin crew had alerted the flight operations manager](#) that she may have been under the influence of alcohol.

The jet reportedly returned to the terminal and a replacement pilot was found to take charge of the flight.

Australia's Civil Aviation Safety Authority (CASA) said it had been informed of the incident by Qantas, which is dealing with the matter under its drug and alcohol management policy.

"Qantas confirmed to us that it was a positive test," said CASA spokesman Peter Gibson. He added that the pilot would remain suspended until a full investigation had been carried out.

While airlines in Australia have their own drug and alcohol management programs, CASA also conducts random testing across the industry.

Gibson said that over the last three years 51,000 tests had been carried out with only 45 positive results.

Crashed Superjet was cleared below minimum safe altitude

Preliminary findings from the Sukhoi Superjet 100 crash inquiry show that the aircraft had been cleared to descend [below the minimum safe altitude](#) for the area.

Sukhoi had intended to conduct a 30min demonstration flight from Halim to Pelabuhan Ratu at an altitude of 10,000ft. Indonesia's National Transportation Safety Committee states that air traffic control cleared the aircraft to depart runway 06 then, upon reaching 2,000ft, turn right to intercept the 200 radial from the Halim VOR beacon before climbing to 10,000ft.

After transferring to Jakarta approach control the crew was instructed to maintain this altitude. But two minutes later - and just 5min into the flight - the pilot requested descent to 6,000ft.



Indonesia's aeronautical information publication showed, however, that the [minimum safe altitude](#) was 6,900ft within 25nm of the Halim beacon.

The controller asked the pilot to repeat the descent request and, after he did so, acknowledged it. The pilot responded: "Descend to 6,000ft."

Two minutes later the pilot contacted Jakarta approach again, asking to make a right orbit, which was also approved at 6,000ft. The controller told investigators that, at the moment of this request, radar showed the aircraft was over a training zone at Atang Sanjaya about 17nm southwest of the Halim beacon.

But the aircraft was later found to have crashed into high terrain 28nm from the beacon, on the 198 radial. The impact site, on Mount Salak, was at a height of about 6,000ft.

The route selected for the flight was not a published airway, the inquiry points out, adding that the minimum off-route altitude was 13,200ft.

Weather information for the time of the accident - taken from a meteorological station about 7nm from the crash site - indicated a cloud base of about 2,000ft, with substantial cloud cover and cumulonimbus activity in the vicinity.

Investigators state that the flight-data recorder contains 22min of information from the flight, from engine start. But their preliminary findings have not detailed the operational status of the terrain-awareness and warning system or the various avionics and navigation systems on board the Superjet.

Neither pilot was found to have any traces of alcohol or drugs in their system. No distress signal was received by emergency services. The aircraft's emergency locator transmitter was found with its antenna detached.

[None of the 45 occupants](#) - comprising two pilots, a navigator, test-flight engineer and 41 passengers - survived the 9 May crash.

Finland issues report on two A330 engine bleed air system failure incidents

The Safety Investigation Authority, Finland published the final report of their investigation into two serious incidents involving Airbus A330 engine bleed air system failures.

The first serious incident occurred on 11 December 2010, approximately 300 km northeast of the city of Arkhangelsk, Russia. The aircraft, registration OH-LTO, was on a flight from Osaka, Japan to Helsinki-Vantaa Airport. Apart from the three crew members in the cockpit, the aircraft was empty.



The second serious incident occurred south of Moscow on 22 December 2010. The aircraft, registration OH-LTS, was on a scheduled chartered flight from Krabi, Thailand to Helsinki-Vantaa Airport. There were 286 passengers and 15 crew members onboard.

Both aircraft experienced a loss of pressurization due to dual engine bleed air system failures. The flight crews donned their emergency oxygen masks because of the decrease of cabin pressure. On OH-LTO the cabin emergency oxygen masks also deployed automatically.

OH-LTO flight crew initiated an emergency descent from cruise level about five minutes after the loss of pressurization and about two minutes after the excessive cabin altitude warning which is a master warning. OH-LTO diverted to Kuopio, its alternate aerodrome.

OH-LTS flight crew initiated a rapid descent from cruise level about two minutes after the loss of pressurization. Excessive cabin altitude warning came on during the descent after which the flight crew continued by an emergency descent. OH-LTS continued to Helsinki-Vantaa airport, its planned destination. Neither serious incident resulted in injuries to persons or damage to equipment.

Both serious incidents were caused by malfunctioning of the engines' bleed regulated pressure transducers' (Pr). The malfunctioning was caused by freezing of water that had accumulated in the bleed regulated pressure transducers' pressure cell rooms, **extremely confined by design**. This being the case, the transducers provided faulty pressure information to bleed monitoring computers. Due to the erroneous information the computers closed both engines' bleed air systems which resulted loss of pressurization in cabin, i.e. an increase in cabin air pressure altitude. The extremely cold air mass en-route during a long time period contributed to the fact that the water froze in the pressure cell rooms.

Furthermore, the relatively rapidly increasing ambient temperatures en-route may have contributed to the engine's bleed air system faults.

Investigators Say Boy, Age 6, May Have Pulled Landing Gear Lever As Plane Touched Down

According to an FAA report, a 55 Baron T-42 Cochise plane landed on its belly at the Fallbrook Community Airpark Wednesday afternoon.

Lauren Funkhouser, of California Aero Marketing, was in her office nearby when someone ran by. "Someone just bellied down, gear-up down the runway," Funkhouser said she heard someone say. "Please call 911. We don't know how bad, but we're taking off."



Firefighters said a father and his six-year-old son were in the twin-engine four-seat plane. It was later determined that the boy [apparently pulled the landing gear lever just as the plane touched down](#), retracting the landing gear and putting the plane on its belly. It skidded to stop without injuring either passenger.

Funkhouser told 10News the plane is worth about \$150,000 and may cost too much to repair.

"Oh, it's totaled; yeah, on the belly," she said.

The propellers were bent, the flaps on both wings are no longer flat and the underside of the plane was scratched.

ASRS reports sought for safety studies

NASA has asked general aviation pilots to participate in two special studies it is conducting with the FAA based on data collected through the [Aviation Safety Reporting System](#) (ASRS). The study, “Aviation Weather in the Cockpit and Aeronautical Information Services via Data Link,” [seeks information](#) from pilots about incidents that occurred while they were using weather or AIS information in the cockpit.

“The information may be textual and/or graphical, obtained via data link or other sources to include ACARS [aircraft communications addressing and reporting system] and cell phones, on the ground or in the air,” said NASA in a news release.

Factors to be analyzed in the study include the type of weather data received, its accuracy and timeliness, the cockpit display used, software or applications used to receive meteorological information, and end user graphical interface ratings, NASA said. The study began in March 2011 and will continue through 2012.

Since March 2007, ASRS also has been the source of data for examining wake vortex encounter events. The study, which will continue at least through 2012, has reviewed wake vortex encounters occurring in all flight regimes, and is analyzing “magnitude of wake encounter, aircraft spacing, aircraft type, runway configuration, and consequences from the encounter in addition to others.”

Pilots who wish to participate in either study can do so by filing an ASRS report or, in some cases, by filing a report with the FAA’s [Aviation Safety Action Program](#).

To acquire greater detail of reported incidents, ASRS staff will contact pilots who submit reports “and request their voluntary participation in completing a Web-based supplemental question set,” NASA said.

Pilots know ASRS as the venue for reporting safety-related accidents or incidents, with the goal of lessening the likelihood of such events occurring in the future. Information gathered from ASRS reports is forwarded to the FAA only after information identifying the reporting party is removed.



Pilots who can show that they filed a report within the allotted time may receive immunity from disciplinary action in any enforcement case arising from the incident—provided, among other conditions, that the violation was inadvertent and not deliberate.

In soliciting ASRS reports for the two special studies, NAS reiterated that all identifying information will be removed before any ASRS research data is provided to the FAA.

ASRS “strongly encourages pilots to participate in the studies and provide a user perspective to support these projects,” it said.

<http://asrs.arc.nasa.gov/publications/studies.html>

<http://asrs.arc.nasa.gov/report/electronic.html>

<http://www.aopa.org/members/files/safety/asrsinfo.html>

<http://asrs.arc.nasa.gov/overview/immunity.html>