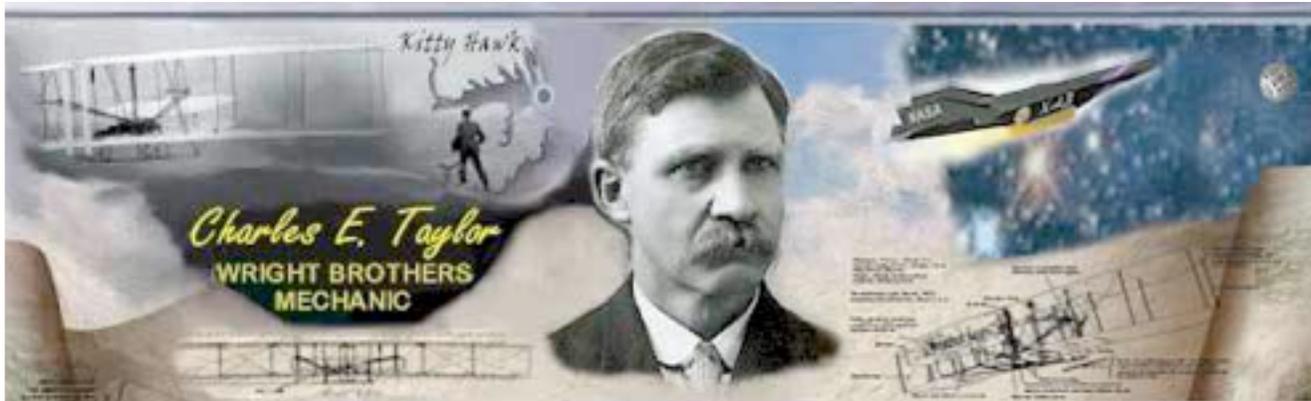


Aviation Human Factors Industry News

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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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Rag Entangles Tail Rotor Drive Shaft

Approaching the destination, Dunshaughlin, Ireland, at 800 ft during a ferry flight on March 28, 2008, the pilot **heard a loud bang** before the helicopter pitched nose-up and yawed right. The pilot told ATC, “I seem to have a bit of a problem here.” He then declared an emergency and said that he had to make an emergency landing.

The helicopter landed heavily on soft ground and **rolled over** onto its left side,” said the report by the Irish Air Accident Investigation Unit.

During the initial examination of the wreckage, **“some cleaning-cloth material** was found that the drive shaft had completely severed just forward of the second bearing, thus cutting off the vital drive to the tail rotor gearbox.

Investigators were unable to “absolutely determine when and by whom the cloth was left in the area of the tail rotor shaft,” the report said.



Jetlink Air CRJ1 at Kigali on Nov 12th 2009, throttle jam, impacted terminal after return

A Jetlink Air Canadair CRJ-100 on behalf of Rwandair Express, registration 5Y-JLD performing flight WB-205 from Kigali (Rwanda) to Entebbe (Uganda) with 10 passengers and 5 crew (**one flight mechanics**), turned around shortly after takeoff with the crew reporting **a jam of their throttle levers**. The airplane landed safely, but **subsequently impacted** the VIP terminal of Kigali Airport at around 13:00 local (11:00Z). A fire broke out.

Emergency services were able to quickly contain the fire. Several injuries

occurred, especially with the flight crew, who **were trapped in the cockpit** needed to be freed. One flight crew was freed about three hours after the accident. Emergency services at the airport report no fatalities. Injuries also occurred to people in the VIP terminal. A total of 10 injured have been taken to local hospitals.



Jetlink reported, that the airplane **was taxiing in**, when the aircraft impacted the pavilion of the VIP lounge **nose-first with engines at high power**. All passengers could leave the airplane on their own, the airline however believed that one female passenger passed away in hospital.

Rwandair Express said in a detailed statement of Nov 13th, that the airplane had taken off at 12:40L, two minutes later the captain requested to return due to a technical problem. The airplane landed safely and taxied to the gate. When the ground crew was just about to put wheel chocks on, the **airplane suddenly accelerated**, turned right and hit the eastern wall of the VIP terminal building about 500 meters away. 8 passengers were brought to the hospital, one female passenger died, one passenger received two broken ribs and a punctured lung, 6 of them were released after evaluation. Both cabin crew were also delivered to hospital and discharged after evaluation. The captain received a broken leg, the first officer a broken ankle, the **flight mechanics** received bruises and was kept in hospital for observation.

Emergency slide falls from Airbus A319 mid-flight

13 November 2009

An emergency slide and the door of the compartment in which the slide was **dropped off** an Airbus A319 jet during a **test flight** from Dallas Love Field.

Federal Aviation Administration spokesman Lynn Lunsford confirmed that an door deployed as the jet took off on a test flight at around 1:30 p.m.

It has been confirmed that a **maintenance error** led to the door being deployed, which weighs over 100 pounds.

Mr Lunsford said that the aircraft was operating with a skeleton crew and had no passengers aboard.

No injuries have been reported and the jet was able to land safely.

The FAA confirmed that is was investigating the incident.



Tests done on oxygen bottles to find answers to Qantas blast

There is no evidence of there being a systematic safety problem **aircraft oxygen bottles**, says Australian investigators in their latest report into the July 2008 accident in which an oxygen bottle on a Qantas Airways 747 exploded.

The Australian Transport Safety Bureau's (ATSB) second interim report on this accident, released today, says to date there is no evidence of systematic problems with oxygen bottles of this type.

On 25 July last year the Qantas 747-400, local registration VH-OJK, was cruising at 29,000 ft while on a flight from Hong Kong to Melbourne when one of the oxygen cylinders on board **exploded** causing a rupture of the forward fuselage and depressurization of the cabin.

The rupture was approximately 2m along the length of the aircraft and 1.5 metres vertically.



ATSB says the cylinder that exploded was lost but, for the purposes of its investigation, it has obtained five cylinders from the same manufacturing lot.

It says all the pressure tests of the cylinders **met or exceeded safety specifications**.

"The minimum allowable rupture pressure prescribedwas 4,111 psi and all the test cylinders exceeded that value", it says.

Today's report also provided details on how the cabin crew and cabin equipment responded to the depressurization of the cabin.

It says "the passenger address tape reproducer - the automatically activated system for addressing passengers in the event of a depressurization - did not function."

It also says "**not all the oxygen masks deployed** and as a result two passengers did not immediately start using oxygen and displayed symptoms of hypobaric hypoxia," a condition resulting from oxygen deprivation.

The ATSB says Qantas has since taken action to address these cabin issues.

As for why one of the aircraft's oxygen cylinders exploded, the bureau says it will complete its investigation early next year.

LA man gets prison for repackaging plane parts

A Los Angeles businessman has been sentenced to 2 1/2 years in federal prison **selling uncertified aircraft manufacturing parts** that were used to make Boeing 737 airplanes.

Prosecutors say 74-year-old Duane Lepire was sentenced Monday in U.S. District Court after pleading guilty in April to fraud for **selling commercial-grade rubber gaskets** that were not approved for aviation manufacturing.



The U.S. attorney's office says Lepire, the owner of Chatsworth Rubber and Gasket Company in Canoga Park, **falsely claimed** the parts were certified for use in aircraft manufacturing.

Lepire **painted and repackaged** the cheaper parts with bogus "certificates of conformance."

The nonconforming O-rings were used to make vibration dampeners that leaked hydraulic fluid, which was a safety hazard but didn't cause any accidents.

TSA Rule Targets Repair Stations

The Transportation Security Administration has prepared new regulations **security procedures** at repair stations. The Notice of Proposed Rulemaking (NPRM) (PDF) will require repair stations to establish security protocols **to guard against unauthorized access to the facility, aircraft and parts.** The new rules would affect 4,227 FAA-certificated shops in the U.S. and 694 in other countries that work on U.S. aircraft. There will be a 60-day comment period on the rule.



In announcing the proposed NPRM, TSA Office of Security Operations Assistant Administrator Lee Kair said the rule will augment existing FAA security rules in place at certificated repair stations. "By enhancing repair station security, this rulemaking **guards against the potential threat of an aircraft being destroyed or used as a weapon,**" he said. The rule, if adopted, will require strict access control and implementation of security awareness training programs and, of course, allow for TSA inspections and audits.

(PDF) http://www.tsa.gov/assets/pdf/nprm_aircraftrepair.pdf

SMS OVERSIGHT CITED IN CANADIAN CRASH

As the FAA gets ready to implement mandatory **safety management systems (SMSs)**, Canadian authorities are warning SMSs **need proper oversight** if they're to do their job of improving flight safety. The Canadian Transportation Safety Board cited **insufficient oversight** of a private operator's SMS in its final report on a landing accident that injured 10 people aboard a Bombardier Global 5000 at Fox Harbour, N.S., two years ago.

Transport Canada has required SMS plans for commercial carriers for but **delegated oversight of SMS implementation** for some operators to the Canadian Business Aviation Association in 2003. The TSB said in its report that CBAA's implementation of **SMS criteria is flawed** and Transport Canada failed to recognize that before the Nova Scotia accident. "This is a serious problem," said Kathy Fox, board member for the TSB. "Safety can be compromised when SMS **plans are vague, deadlines are flexible, and critical oversight is lacking**. Without proper milestones or auditing, SMS cannot function properly and the risks increase." The flawed SMS process is a thread throughout the TSB's findings, which determined the pilots ducked under the standard approach and, because they were used to flying smaller aircraft into the field, misjudged the touchdown and hit the ground seven feet before the pavement.



TSB's findings: <http://www.tsb.gc.ca/eng/rapports-reports/aviation/2007/A07A0134/A07A0134.asp#s3.1>

FAA Convenes First International Runway Safety Conference



The FAA, in cooperation with the American Association of Airport (AAAE) and the MITRE Corporation, will hold the first **International Runway Safety Conference** December 1-3 at the Omni-Shoreham Hotel in Washington, D.C.

Nearly 500 people are expected to attend "Taxiing Toward Tomorrow" which will focus on the **reduction and eventual elimination of runway incursions and excursions**. The event will bring together members of the safety community and a cross-section of key industry stakeholders to work towards solving one of aviation's most serious problems.

While the vast majority of runway incursions do not result in accidents, **they point to a risk** in the system that needs to be addressed immediately. During Fiscal Year 2009 serious runway incursions dropped 50 percent. This is a positive development but **more needs to be done**. The FAA and the aviation industry are committed to finding the most effective ways to eliminate these incidents.

FAA Administrator Randy Babbitt, U.S. Deputy Secretary of Transportation John Porcari, NTSB Chairman Deborah Hersman and Capt. Robert Bragg - the **last surviving flight crew member** involved in the 1977 runway collision of two jumbo jets at Tenerife - will headline the conference.

Capt. Bragg, the first officer and last living crew member from the Pan Am jet involved in the Tenerife accident, will offer his unique, real-world perspective at the summit. Special keynote talks by Administrator Babbitt and Chairman Hersmann will emphasize runway safety's prominent role in the U.S. safety agenda.

The agenda also includes discussions and reviews of runway safety's most critical issues, including **human factors**, airport layouts, technology, cockpit and air traffic control procedures and safety management systems. Panels will assess runway safety progress to date, initiatives underway, and plans being made for future environments both in the U.S. and around the world.

NTSB Chief Urges Fight Against Fatigue

Hersman calls fatigue an **'insidious'** problem throughout transportation. Fatigue “is one of the most insidious issues in the transportation industry,” and **more must be done** to fight it, said Deborah A.P. Hersman, chairman of the National Transportation Safety Board.

“We establish a 72-hour prior history in every NTSB investigation,” Hersman said at the National Press Club in Washington Nov. 16. “Unfortunately, **we find fatigue in more incidents and accidents** than you would think.”

She said the NTSB has recommended the Federal Aviation Administration **set hours of service rules** for flight crews, **aviation mechanics** and air traffic controllers. It took Congress to change century-old rail employee hours of service rules, she noted.

The Federal Motor Carrier Safety Administration, which has issued truck driver hours of service rules three times since 2003, plans to propose a new HOS rule early next year.

Companies as well as government **need to do more** to address the issue, she said, noting that many businesses **don't have fatigue policies or procedures** that allow tired employees to take time off.

Earlier this year, the NTSB cited fatigue as a factor in a fatal subway accident in Boston in which a train operator failed to obey a signal and crashed into the rear of another train. Investigators found the operator, who was killed in the accident, had taken **a drug found in sleep aids** at least one



of the nights before the accident and was at high risk for sleep apnea.

After the accident in Boston, the NTSB recommended the Federal Transit Administration develop and disseminate guidelines for identifying and treating individuals at **high risk for sleep disorders**.

The NTSB also has recommended electronic onboard recorders be installed in all interstate commercial trucks to collect data on the number of hours they are operated and accident conditions.

Fatigue Management (“Sleepy Sailor” Program)

Source: Fleet Logistics Support Squadron 57 (VR-57)

Description: The Conquistadors of VR-57 instituted a new program this summer to **mitigate the risk** of squadron personnel driving long distances **after extended or late-day/night evolutions**. The **“Sleepy Sailor”** program affords all personnel, if requested, **on-base lodging accommodations** for the night, following the completion of a flight mission or **maintenance evolution**.



“Fatigue plays a huge role in both on- and off-duty mishaps. This is just one way **we can manage the fatigue** associated with the long days inherent with this job,” says CDR William Crump, skipper of VR-57.

VR-57 is based at Naval Base Coronado (Naval Air Station North Island), operating the C-40 aircraft in support of worldwide Navy Unique Fleet Essential Airlift (NUFEA) tasking. A typical VR-57 mission might consist of several destinations across multiple time zones. The last leg of a mission could approach 12 hours of flight-time for the day, or return to North Island past midnight (a 24-hour airfield). A non-local Sailor taking advantage of this program would request, prior to the flight mission/maintenance evolution, **one night of lodging on-base**. He or she would then have a chance to **“recharge”** before driving (sometimes hours) back home.

“This is a ‘no-brainer’ for us, and **absolutely the right thing to do**,” explains CDR Tim Rascoll, VR-57’s executive officer. “There is no reason our most valuable assets should put their well-being on the line if they are not

functioning **100%.**"

The "Sleepy Sailor" program is offered to all VR-57 personnel, but mainly targeted towards Selected Reservist Aircrew and **Maintenance Department members**, since they are the most likely beneficiaries as they often reside outside the local area.

Air Force finishes safest flying year

Fiscal year 2009 was the **safest flying year** in the 62-year history of the Air Force with only 17 Class A mishaps.

The next best year was fiscal year 2006 with 19 Class A mishaps. A Class A mishap is one where there is loss of life, an injury resulting in permanent total disability, the destruction of an Air Force aircraft, or property damage or loss exceeding \$1 million.



According to William C. Redmond, Air Force Safety Center executive director, regarding destroyed aircraft specifically, the Air Force matched its safest year, (fiscal year 2006) with eight destroyed aircraft, down from 15 in fiscal year 2008.

"When we looked at our emphasis areas for fiscal year 2009, **'back to basics' and 'training rules of engagement discipline'**, the results were great because they were only a factor in one Class A Mishap," Mr. Redmond explained. "That's the lowest we've ever seen."

"At the commander level, at the Airman level, **at the maintenance level**, supervisors and the command and wing safety teams are really doing their jobs. It's **back to basics and compliance** is king from what we are seeing."

Col. Sidney Mayeux, Air Force chief of flying safety, echoed these thoughts. "For years we have been saying at Air Force level 'go back to basics.' The beauty of the last year is that Gen. Norman Schwartz, our chief of staff and our chief of safety (Maj. Gen. Frederick Roggero), have put a quantifiable, tangible definition to 'back to basics' and it's endorsed from their level down."

"It's a culture of discipline and compliance," said the colonel. "By paying close attention to mission training rules, rules of engagement and adherence, we're finding that Airmen with 1,000, 2,000 or 3,000 flying hours are taking the time to go back to basics, to **remember the basic rules**. It helps them remember what they should be doing and when they should be doing it, to reinforce the basic standards and requirements. But it also provides a basic foundation that **helps them to smartly recognize those rare occasions** when deviating from the rules might be the better option."

What happens, Colonel Mayeux said, is that "we end up with **smarter aviators**. **They are following the rules up to when they have to make a risk decision and are making smarter risk decisions**. I'm very proud of the Air Force's performance this year in aviation safety."

Mr. Redmond said they also saw mission preparation and systems knowledge improve over the previous years. "It was a factor in only three fiscal year 2009 mishaps," he said. "Guidance and procedural adherence - following the rules all of the time in the air - was very good last year also."

There was a tremendous improvement in between fiscal year 2008 and 2009 in **knowing personal limits** and ejection decisions, he said. "People did get out of the jet when they had a problem."