

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:

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Check Those Latches!

The NTSB, The FAA and Transport Canada continue to hammer out defenses against the ongoing problem of in-flight fan cowl loss incidents due to latches being left unlatched. Since 1992, there have been 15 engine cowl loss incidents involving single aisle Airbus aircraft. Since 2001, there have been 33 fan cowl loss incidents involving Bombardier CL-600 aircraft, with six incidents in 2007 alone. This 15-minute video provides methods and techniques to help all people remember the importance of assuring that the latches are closed. Includes student guide in pdf format, and a test with "proof of training" and test results emailed to an address of your choice.



Time allotment: 15 minutes.

This email contains the username and password for individuals to take the online course: "Remember to Close the Latches."

To take this course, point your browser to:

www.crucialknowledge.info/latch

Enter your username and password:

Username: **crucial**

Password: **knowledge**

The course is accessible from any internet connected computer with Flash installed (nearly all computers have this program).

The training program has IMPORTANT audio.

SPEAKERS ARE REQUIRED.

It is advisable for students to click on the handout button and print the student handouts (Adobe Acrobat .pdf) to assist in taking the quizzes.

Prior to taking the quiz at the end of the presentation, students may enter their own or their supervisors email address. In that way, test results can be directed to the person of the student's choice.

Contact Gary Burch directly using the information below if you interested in purchasing this and other presentations for your organization.

Gary Burch

Program Manager

Crucial-Knowledge (.info)

301-412-5966

Continental employee defends himself at trial on Concorde crash

A retired Continental Airlines maintenance chief defended himself Tuesday from charges that **he was partly responsible** for the crash of a Concorde supersonic jet a decade ago. Continental Airlines, Inc., and two of its employees are among those on trial for **manslaughter** in the fiery July 25, 2000, crash of the Concorde, which plunged into a hotel soon after takeoff from Charles de Gaulle airport, killing all 109 people aboard and four on the ground.

The Houston-based carrier is on trial because investigators say a Continental DC-10 **dropped a metal strip onto the runway** before the Air France Concorde took off. They say the runway debris gashed the plane's tire, sending pieces of rubber into the fuel tanks and sparking a fire.

Continental denies any responsibility, saying a fire broke out on the Concorde before the plane reached the runway debris.



A Continental mechanic **is accused of violating guidelines** by replacing the DC-10's wear strip with titanium instead of a softer metal. John Taylor, 41, is not expected in France for the trial.

His one-time supervisor, 70-year-old retired maintenance chief Stanley Ford, is also facing manslaughter charges **for validating the strip's installation**. Ford argued Tuesday in court that his job was mainly administrative.

Asked if he was expected to double-check the quality of workers' repairs, Ford said **he had to have confidence** in mechanics' ability to perform their jobs.

The prosecution also accuses three French officials of underestimating trouble spots on the Concorde itself, and they are also charged with manslaughter.

The trial is expected to last through May. Its main goal is to assign responsibility; most of the victims' families received settlements years ago.

FAA To Fine Northwest Airlines For Improper Windshield Inspections

The Federal Aviation Administration (FAA) has proposed a \$1.45 million civil penalty against Northwest Airlines for operating a number of its Boeing 757 aircraft **without proper windshield wiring inspections**. A 1990 FAA airworthiness directive on Boeing 757s required inspections for the presence of undersized wires in the heating system for both the captain's and first officer's windows, and replacement if needed.



Left uncorrected, the problem could cause overheating, smoking and possibly a fire.

Northwest **wrote maintenance instructions** for its mechanics in April 1990 that omitted the required inspection of the wires under the first officer's window. As a result, 32 of the carrier's 757s flew more than 90,000 passenger flights between December 1, 2005 and May 27, 2008, while **not in compliance** with the airworthiness directive.

"Safety is the number one priority for the Department of Transportation," said Transportation Secretary Ray LaHood. "The FAA has airworthiness directives for a reason and **carriers cannot pick and choose** when they want to comply."

On May 28, 2008, Northwest discovered it had not performed the proper inspections and revised its maintenance instructions. However, the instructions did not require the work be performed before further flight, but at the next planned overnight layover. As a result, 29 of the 32 aircraft flew 42 passenger-carrying flights while they were **still out of compliance** with the airworthiness directive.

"When an air carrier realizes that an airworthiness directive is not being followed the problem **must be corrected immediately**," said FAA Administrator Randy Babbitt. "Safety cannot wait for the next scheduled maintenance."

The airline has 30 days from the receipt of the FAA's civil penalty letter to respond to the agency.

The Pilot/Mechanic Disconnect (ASRS)

This month's ASRS reports offer a cross-section of incident reports that illustrate

reporters' concerns for **communication, professionalism, and courtesy**. This narrative is a reminder that positive attitudes and thoughtful actions can go a long way toward making flying safer for everyone.



A B737 Captain **pleaded** with Maintenance Technicians to follow established procedures.

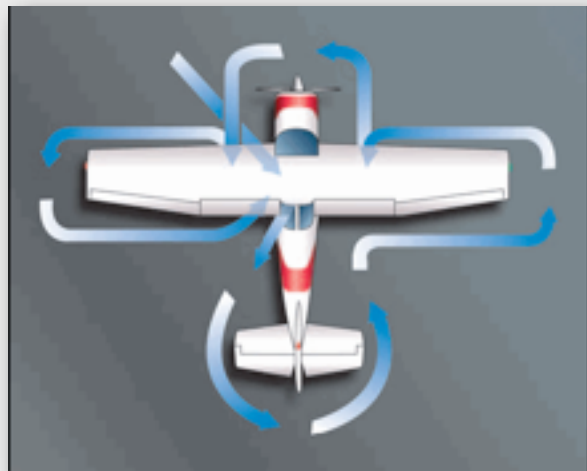
Upon doing external preflight inspection, I noticed several Mechanics working on the aircraft. They were changing a tire. I asked them if they had **posted the sign alerting pilots that maintenance was being performed** and not to touch controls. I told them that my First Officer was in the flight deck (we were doing a scheduled aircraft change) and I had not noticed the sign and he was probably about to perform preflight duties. They said they had not posted the sign, but that '...he can do anything he wants except turn on hydraulics or mess with the parking brake.' I tried to convey to them **the risk they had just incurred by not following procedures**, but they seemed to shrug it off. We (the pilots) had no warning at all that they were down there, and very well could have turned on a hydraulic pump for any of many reasons, including to keep the wheel [yoke] steady in windy conditions.

Please, please, please advise all Mechanics of the **importance of following the procedure of displaying the card** in the flight deck while they are working on the airplane. Indifference and complacency can maim and kill.

Post-maintenance Flights Are Critical

This is the time **for a slow, focused** preflight examination.

I worked as the graduate placement officer at an A&P school many years. The students would perform the annual inspections on my little Grumman Yankee; under the supervision of their properly licensed instructors, of course. Like now, general aviation was in a down cycle, and I remember nervously addressing the graduating class, explaining how I would be using my airplane to fly around, scouring every airport within range for companies that might be hiring. After an awkward pause, one of the guys muttered, "Geez. If you'd told us you were going to use it to find us jobs, we've fixed it better."



Even under less demanding conditions, the **first flight after maintenance needs to be approached with particular caution**. Even assuming all the work was performed flawlessly, you need to remember that the airplane has **just been turned inside out**. And when reassembled, some stuff might not have gone back together just the way you left it. One pilot I know couldn't get his radio to work after an annual—not a peep. After increasingly aggravated calls for a radio check, he taxied back to the shop, convinced they had severed a wire or shorted a connection. The technician on duty politely pointed out the volume control was turned all the way down. (... all right, it was me.)

But more serious problems do surface. This is the time for an extended preflight inspection, and your **mental attitude** is what it's all about. If you usually check the oil through the small access door, take the time and patience to open the cowl for a detailed look inside the engine compartment. Scan carefully for anything that doesn't seem just right—loose or chafed wires, bolts without safety wire, or other unsecured bits. Same with the airframe. As you walk and crawl around it, check for anything that might look even a little bit askance or uneven. And you're not insulting the technician when you ask about something that catches your eye.

In the cockpit, your **printed checklist** is your best friend on the first flight after maintenance. But this time, as you enumerate each item, try to imagine a particularly ingenious gremlin doing its best to dismantle or readjust anything and everything that used to be set up just the way you liked it. Include the seat adjustment, throttle and/or prop control friction locks, trim, instrument settings—and everything else in your usual cockpit sweep. There have been documented cases of **ailerons rigged backwards** during maintenance—so your "free-and-correct" control check should be performed with particular concentration after maintenance. That's a small sample. There's plenty more, if you think about it.

If you rent airplanes, you face many of the same issues as an aircraft owner if you draw the short straw and book an airplane just out of the shop. Your attention needs to be that **much more focused**, because you are that much less familiar with the airplane's particular idiosyncrasies.

And don't forget to check the volume control on the radio.

EX-BA CAPTAIN TALKS ABOUT HEATHROW CRASH

The basic details are strikingly similar but the outcomes for the captains of two airliners that crash landed without loss of life couldn't be more. On one hand, there's Capt. Chesley Sullenberger, sometimes called the Hero of the Hudson, who ditched his A320 in the Hudson River in Jan. of 2009. Sullenberger was able to retire early from an industry of which he was sometimes openly critical. Then there's Capt. Peter Burkill, the senior officer aboard British Airways Flight 38, which suffered an **uncommanded dual engine rollback** on short final and crash landed short of the runway at Heathrow Airport in 2008. Burkill recently broke his silence on the crash and has written a book on the topic. He says he resigned from BA due to persistent malicious rumors about his actions during the crash. He's now on welfare. In a podcast interview with AVweb's Glenn Pew, Burkill gives his description of the 30 seconds that preceded the crash and his role in its survivable outcome.



<http://www.avweb.com/alm?podcast20100329&kw=RelatedStory>

“Thirty Seconds to Impact”

Written by Peter Burkill & Maria Burkill

Peter was the Captain of the British Airways flight that lost power to both engines, 2 miles before the runway, and crashed into London Heathrow in January 2008.

Peter had only **35 seconds** from becoming aware of the problem to impact and during this time his actions in "moving the flaps" helped give the stricken aircraft enough lift to clear the airports perimeter fence by just over 7 feet, saving all 152 souls on board and many more on the ground.



<http://peterburkill.com/upcoming-book.html>

http://www.google.com/url?sa=t&source=web&ct=res&cd=4&ved=0CA8QFjAD&url=http%3A%2F%2Fpeterburkill.blogspot.com%2F2010%2F03%2Fthirty-seconds-to-impact-is-released.html&ei=QFOxS_yNGMH_lgeAiJiRBQ&usg=AFQjCNEWbKWMxy_N5meFXHVubUz3V-FbvA&sig2=VZih068HoYt-o9ADcgyYrA

Helicopter Crash Statistics

According to Mike Kriebel, senior vice president of Aviation Underwriters Association, the helicopter accident rate is **higher than the accident rate for forms of aviation**. In 2004, the US civil helicopter accident rate was 8.09 per 100,000 flight hours. The fatal accident rate for helicopters was 1.48 per 100,000 flight hours. The accident rate for "on demand" air taxis was 2.21 per 100,000 flight hours, with the fatal accident rate being 0.78. The helicopter accident rate of 8.09 is as much as 30 percent higher than the accident rate for general aviation, which has an accident rate of 6.22.



A 2005 International Helicopter Safety Symposium concluded with participants agreeing that the helicopter accident rate is "excessive and unsustainable over any longer period of time."

ICAO to hear concerns over checklist vulnerabilities

Checklist design will be on the agenda of an ICAO high-level safety conference this month, following the fatal loss of a Spanair Boeing MD-82 during take-off at Madrid two years ago.

Spanish delegates, on behalf of European air transport authorities, are set to put forward a proposal to **apply safety management principles** to design.

Spanair flight JK5022 crashed in August 2008 after its crew **failed to extend** the MD-82's flaps.



Investigators found that the pilots **twice missed a specific check** on the flap deployment while taxiing out for a departure which had already **previously been interrupted** by a technical problem.

The Spanish presentation states that checklists "continue to be long and protracted" and adds that they do not necessarily prioritize the most important items.

"It is not unusual that the sequence of safety-critical items to be verified does not reflect the **safety hierarchy or the importance** of the verification to be performed," it says.

Linear, uninterrupted checklists, it adds, are inconsistent with **concurrent and frequently-interrupted flight-deck activity**, and while checklist availability is considered a safety barrier, specific standard procedures to support the checklist process are absent.

"In particular, clear procedures on how to proceed when the execution of a checklist is interrupted, and how to ensure checklists are completed after an interruption, **are not always available**," it says.

Application of basic safety management principles has shown "promising potential" to protect against vulnerabilities **during high-workload phases** of flight operations, and the delegation will formally propose that ICAO studies the application of these principles to checklist design and procedures.

Runway safety incidents may be responding to treatment

In the third year since it launched its runway safety initiative, Flight Safety Foundation runway safety results appear to have improved for 2009.

The results were revealed at FSF's European Aviation Safety Seminar in. Last year there were no runway incursions, one runway confusion event, **but 25 runway excursions, representing 28% of all accidents and involving 19 fatalities.**

This compares with 2008's figures of no incursions or confusion events, **but 38 runway excursions and 36 resulting deaths.**

Runway excursions that year represented 39% of all accidents. The previous year showed 334 fatalities from excursions.

So excursion events, and resulting fatalities, seem to be reducing since the launch of the **runway safety initiative**, but the FSF is not yet claiming that the initiative and the reduction are linked.

Runway safety incidents from 1995 to 2008 show that the annual average is fewer than one runway incursion or confusion event, **but 30 excursion accidents.**

Presenting the figures, the FSF's director of technical programs Jim Burin said the most effective action airlines can take is to have **a stabilized approach policy** that it ensures its pilots carry out, and to have a genuinely **no-blame go-around policy.**

Air traffic control should play its part by avoiding slam-dunk approaches or late runway changes to facilitate stabilized approaches, and to provide the best real-time weather and runway data available.

Airports can assist by grooving runways, providing good lighting, and they can reduce potential damage by having safe runway overrun areas.



Picture This!



If these can hold you up then why not here?