

Aviation Human Factors Industry News

Volume VII. Issue 38, November 11, 2011



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:

★Airline flew 'unsafe' Boeing 737 on more than 2000 flights

★FAA cites improper repairs to Southwest planes

★The £1.5m fuel mix-up: RAF admits filling its helicopters with ANTI-FREEZE

★Lake Charles bound plane lands in Sulphur by mistake

★The fixation factors

★Breath Tests Mandatory For Indian Pilots

★Pilot's Tip of the Week - #96

★How Ethnic Culture Affects Safety Culture

★Rediscovering the Greatest Human Strength

★9 Traits That Make Great Employees Outstanding

Airline flew 'unsafe' Boeing 737 on more than 2000 flights

The US aviation regulator recently proposed a \$US590,000 fine for Alaska Airlines for allegedly operating a Boeing 737 jet on more than 2000 flights when it had failed to meet safety regulations. The penalty follows a [ceiling fire on the aircraft](#) when it was parked at Anchorage Airport on January 18 last year, the Federal Aviation Administration (FAA) said in a statement.



"The fire was caused by [chafed wiring that had resulted from improper installation of a hose clamp](#)," it said, noting that the aircraft's manual includes "[an explicit warning](#)" about proper installation of the hose clamp.

"Maintenance work has to be performed precisely and correctly every time," added FAA Administrator Randy Babbitt.

The plane had conducted 2107 flights in breach of regulations, according to the FAA, and Alaska [most recently performed maintenance](#) in the burned area in August 2008, said the statement.

The airline, which has 30 days to respond to the proposed fine, subsequently discovered the [same problem existed on nine](#) other B-737-400 aircraft in its fleet and took action, the FAA said.

FAA cites improper repairs to Southwest planes

The Federal Aviation Administration proposed a \$1.1 million fine Monday against an [aircraft repair station for allegedly using improper maintenance procedures](#) to find cracks and prevent damage to the fuselages of 44 Southwest Airlines jets.

From 2007 to 2009, Aviation Technical Services Inc. of Everett, Wash., [failed to fully inspect](#) the Boeing 737-300s for [metal fatigue and incorrectly installed in rivet holes](#) that hold pieces of aircraft skin in place, the FAA said in a statement. The purpose of the inspections and repairs was to prevent incidents like the one that occurred in April, when a hole opened in the roof of a Southwest Boeing 737 with 118 people aboard, forcing an emergency landing in Yuma, Ariz. But the FAA said the plane with the hole was not among the 44 improperly repaired planes.



Sources familiar with FAA's investigation told The Associated Press in February 2009 that 44 Southwest planes [improperly repaired](#) by Aviation Technical Services were later flown on [100,000 trips](#).

This is the second time in less than a year that the FAA has proposed a significant fine against Aviation Technical Services for [failing to follow procedures](#) for finding and repairing fuselage cracks in Southwest planes.

In November, FAA proposed fining the repair station \$530,000 for [allegedly not properly bracing 14 planes while replacing old rivets and metal skin](#). The company also [failed to install and monitor equipment](#) to ensure that maximum loads did not exceed limits for the engines, wings and horizontal stabilizer locations while the aircraft were suspended in "cradles."

As they age, jets often develop tiny cracks, especially in stressed areas such as around windows. Patches are often used to shore up weak spots.

Aviation Technical Services said in a statement that it is cooperating fully with the FAA and expressed confidence in the quality of the company's work.

Southwest spokeswoman Brandy King said the airline continues to use Aviation Technical Services for its aircraft maintenance.

Southwest "holds our vendors to the highest possible standards, and we focus on assuring that all maintenance is performed in accordance with FAA and manufacturer requirements," the company said in a statement. "Southwest has [made numerous enhancements to our internal procedures, as well as improvements related to oversight of our repair vendors](#)."

In 2009, Southwest paid a \$7.5 million settlement in response to an FAA finding that it had flown 737s two years earlier without complying with mandatory inspections for fuselage cracks. FAA had originally sought a fine of \$10.5 million, but later reduced the amount.

The £1.5m fuel mix-up: RAF admits filling its helicopters with ANTI-FREEZE

As many a driver knows to their cost, putting the wrong thing in your petrol tank at the local garage is an embarrassing business. But when it's military aircraft you're dealing with instead of a Ford Focus - such a

[mistake](#) can be very expensive indeed. That's what red-faced air chiefs have discovered after de-icer was wrongly added to £1.5million of aviation fuel – rendering it unusable.



Petrol blunder: Two military supply helicopters [have had full engine changes](#) after the incident

The contaminated fuel was stored in a giant tanker at the Mount Pleasant RAF base on the Falklands.

Now a multi-million pound clear-up operation has been launched, as the military investigates how the accident happened.

Critics have said there was ['no excuse' for such a basic mistake](#) - the latest in a string of expensive defense blunders.

Last month it emerged the MoD paid £2.4million for rescue and repair after the nuclear submarine HMS Astute ran aground on a training exercise.

Another £1.7million was paid out when a warhead crashed during testing in California.

It paid £1.7million to a company in an out-of-court settlement after it cancelled a furniture contract, and it emerged the same amount was spent on helmets and body armor for Ugandan soldiers.

It comes at a time when the department is having to slash its £34billion budget by 8 per cent, as an estimated 17,000 jobs are expected to go.

Matthew Elliot chief executive of the TaxPayers' Alliance said: 'Taxpayers can't afford the cost of any wasted fuel let alone the millions that his MOD's blunder has wasted.'

The contaminated fuel was stored in a giant tanker at the Mount Pleasant RAF base on the Falklands.

'There's already a huge black hole in the defense budget, it doesn't need basic, avoidable mistakes like this adding to it.

'There's no excuse for wasting such huge quantities of expensive aviation fuel, [precautions should have been taken](#) to ensure this could never of happened.'

Lake Charles bound plane lands in Sulphur by mistake

It happened again. Passengers aboard a Continental Express plane bound for Lake Charles were delayed after the plane landed outside of Sulphur by mistake one night a few weeks ago. The aircraft landed at Southland outside Sulphur instead. Sam Larsh, airport manager tells 7News the plane, coming from Houston, was scheduled to land at 10:30 p.m.



"This has happened here three times in the last 15 years or so," Larsh said. "It's [an easy mistake to make.](#)"

The Lake Charles and Southland Field runways are the same layout and both Lake Charles Regional and Southland Field are the [same latitude](#), but different longitudes according to Larsh.

"The runways again are based on prevailing winds, so airports in this area all have similar runway headings," he said.

The air traffic control tower at Lake Charles Regional [is not staffed](#) after 10 p.m., which may have added to the confusion, officials said.

The aircraft was still parked at Southland Field Thursday morning and was returned to George Bush Intercontinental Airport in Houston Thursday afternoon.

THE FI*ATION FACTOR

The fixation factors

Distracted Driver

Intent on locating hazardous debris on a runway at night, a Ramp Vehicle Operator inadvertently crossed an active runway.

■ ...On duty as Ramp One, I received a call from Tower [regarding] possible debris on Runway 9L due to a tire blowout.... Tower cleared me to inspect Runway 9L and directed me to [hold short of intersecting Runway 13](#).... I proceeded onto Runway 9L westbound doing a shallow "S" pattern to cover as much area as possible.... [During] the inspection Tower advised that I had crossed Runway 13....

Later I spoke to the Tower supervisor to confirm that an unauthorized movement across an active runway had indeed transpired. I [fixated](#) on accomplishing my task and [tunnel vision](#) caused me to miss the intersecting runway....

Breath Tests Mandatory For Indian Pilots

The Hindu is reporting that the government is finished implementing a program in which [all airline pilots in the country](#) must submit to a pre-board [breathalyzer test](#). The newspaper says the Directorate General of Civil Aviation announced last that 100 percent of crews now undergo the pre-flight check. The program was initiated last year in light of random checks conducted in 2009 and 2010 that [nabbed 57 "tipsy" pilots](#) trying to go to work. All of India's major airlines were represented in the drunk-pilot total.



Of the 57, 11 were fired and the remainder were suspended for varying lengths of time. The new rules spell out penalties more precisely. Anyone blowing positive gets a three-month suspension and repeat offenders get five years.

Pilot's Tip of the Week - #96

This week, Bob Martens offers a simple rule of thumb for deploying flaps in the traffic pattern.



View the tip here...

http://www.pilotworkshop.com/tips/flaps_approach_landing.htm

Fly Safely,

Mark Robidoux

PilotWorkshops.com

How Ethnic Culture Affects Safety Culture

The notion of “**safety culture**” recognizes that workplace safety isn’t just about machinery and industrial processes but is **rooted in human behavior**. Hooray for that bit of insight. But we still have a long way to go before we can use this nugget of truth to make actual work conditions safer. What Is Safety Culture? When we speak of “culture”—at least in the workplace safety context—we posit a world of human beings holding the same basic values, beliefs and conceptions. Consequently, we see the workforce as monolithic and assume that the steps we take to “build a safety culture” will affect all of our workers the same way.

That can’t be right. **Every person is wired differently**. One of the great differentiating factors of human beings is ethnicity. People from Mexico don’t see the world the same way as people from Japan. This **culture of ethnicity** is bound to have some impact on the culture of safety.

The Korean Air Experience

In his book, *Outliers*, English author Malcolm Gladwell uses the example of Korean Air to illustrate how the ethnic makeup of workers can affect a company's safety record. Airline crashes, mercifully, are a rare occurrence. So for one airline to experience **seven of them in a decade** is unfathomable. But that's what happened to Korean Air.

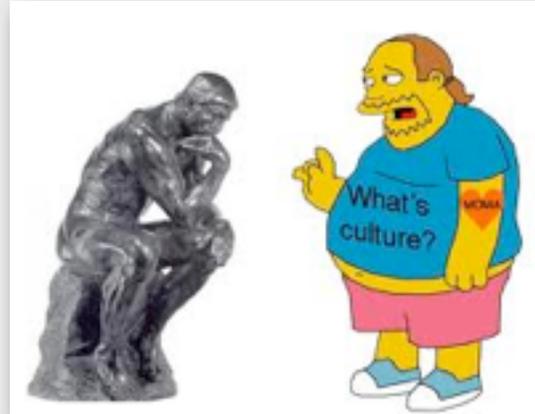
From 1988 to 1998 United Airlines had a loss rate of 0.27 per million departures. In other words, United lost a plane in an accident once every four million flights. Over this same period, Korean Air's loss rate was 4.79 per million departures. The airline's safety record was so dismal that Canada almost revoked its landing privileges.

In 2000, Korean Air hired an outsider from Delta Air Lines—an American named David Greenberg—to run flight operations. Greenberg did a thorough evaluation of the **language skills and training** of the airline's flight crews. His conclusion: Flight crews "were trapped in roles dictated by the heavy weight of their country's cultural legacy." Translation: **Certain aspects of Korean culture** were increasing the risk of crashes on Korean Air flights.

The specific problem was the Korean **deference to authority**. Gladwell points out that the Korean language includes six conversational levels indicative of hierarchy. These language levels apparently played a role in the 1997 Korean Air crash in Guam. Tapes from the flight's blackbox revealed that the first officer and flight engineer recognized that the **captain was tired** and oblivious to mechanical dangers the plane was experiencing. But they could only "hint" at the problems; confronting the captain directly was out of the question even after it became clear that disaster was imminent.

So, Korean Air **completely revamped its language protocols and training procedures**. Among other things, flight crews were required to communicate with one another in English during flights to reduce their inhibitions about questioning authority.

Things improved dramatically. From 1999 to 2009, Korean Air had no crashes. In 2006, the airline received the Phoenix Award from Air Transport World for its safety transformation and experts now consider Korean Air to be one of the world's safest carriers.



Conclusion

Gladwell isn't suggesting that ethnicity determines or is even a dominant factor in safety performance. But what he is saying is that workers' nationality, language and culture **can impact how safely they do their jobs**. This is a point well worth considering when you set out to build a safety culture at your own company.

Rediscovering the Greatest Human Strength

Consider this book an "instant classic: of behavioral science, said James Holmes in *TheDailyBeast.com*. One of the author's most surprising discoveries is that will power is deeply affected by a **person's blood-sugar level**. Indulging in a tasty, he found, seems to strengthen a test subjects ability to exert self-control. But so can drinking an unpleasant concoction--- provided that the beverage delivers glucose to the brain. That finding "has impressive explanatory power." For one thing, it reveals why dieting can be so hard: People need the fuel from food to resist food. It even explains why parole boards are much more likely to risk granting a prisoner freedom after lunch then just before it. **A drained brain resist tough choices**.



9 Traits That Make Great Employees Outstanding

Everyone knows great employees are dependable, reliable, proactive, great team players, have strong work ethics... all the standard (**yet often uncommon**) qualities. So what traits take a great employee to the next level and make them a truly outstanding employee? **The extra 1%**: The qualities that often go unnoticed (and unremarked in performance evaluations) yet make a major impact on performance.



Here is my list of qualities that make an already great employee outstanding:

- **A little bit “off.”** The best employees are a little different: Quirky, sometimes irreverent, happy to be unusual... they seem slightly “off,” but in a really good way. Unusual personalities shake things up, make work more fun, and turn a vanilla group into a team with flavor and flair. People who aren’t afraid to be different stretch boundaries, challenge the status quo, and often come up with the best ideas. But for this to be a great quality, the people who are a little “off” also need to...
- **Know when to reel it in.** A non-standard personality is a lot of fun until it isn’t. When times get tough, major challenges pop up, or situations become stressful, even the most eccentric should know when to set aside their desire to express their individuality and fit seamlessly into the team. Outstanding employees know when to play and when to be serious, when to be irreverent and when to conform, and when to challenge and when to back off. Tough balance to strike, but outstanding employees walk that fine line with ease.
- **Ignore job descriptions.** The smaller the company the more important it is that employees think on their feet, adapt quickly to shifting priorities, and do whatever it takes, regardless of role or position, to get things done. When a key customer’s order is in danger of shipping late, outstanding employees know without being told there’s a problem — and jump in without being asked, even if it’s not “their job.”
- **Eager to prove others wrong.** Self-motivation often springs from a desire to show that doubters are wrong. The kid without a college degree or the woman who was told she didn’t have leadership potential could have a burning desire to prove themselves. Education, intelligence, talent, skill — all are important, but drive is critical.
- **Praise in public.** Few things can boost morale more than praise from a peer, especially a peer you look up to. Outstanding employees recognize the contributions of others, especially in group settings where the impact of their words is even greater. But they also know when to...
- **Complain in private.** We all want employees to raise issues, but some problems are better handled one-on-one. Great employees often get more latitude to bring up controversial subjects because their performance allows greater freedom. The employee who comes to you after a meeting to discuss a sensitive issue that if brought up in a group setting would have set off a firestorm does you and the business a favor. And speaking of favors...
- **Ask questions for others.** Some employees are hesitant to speak up in meetings. Some are even hesitant to speak up privately. For example, an

employee once asked me a question about potential layoffs. After the meeting I said, “Why did you ask? You already know what’s going on.” He said, “Yeah, I did, but a lot of other people don’t — and they needed to hear the answer from you.” Outstanding employees have a feel for the issues and concerns of those around them and step up to ask questions others are hesitant.

- **Start work on time.** What does “on time” mean? Walking in the front door on time? Getting to your desk on time? Outstanding employees start working when the workday starts; they don’t get their coffee, hang around and chat, take care of personal stuff... they hit the ground running, on time. Granted, this might just be a pet peeve, but if your start time is 8 a.m. shouldn’t you be working at 8 a.m.?
- **Tinker.** Some people are rarely satisfied — in a good way — and are constantly playing around with something: Reworking a report, tweaking a process, experimenting with a different workflow. Great employees follow processes. Outstanding employees go a step farther and find ways to make those processes even better, not just because they are expected to but because they can’t just help themselves.