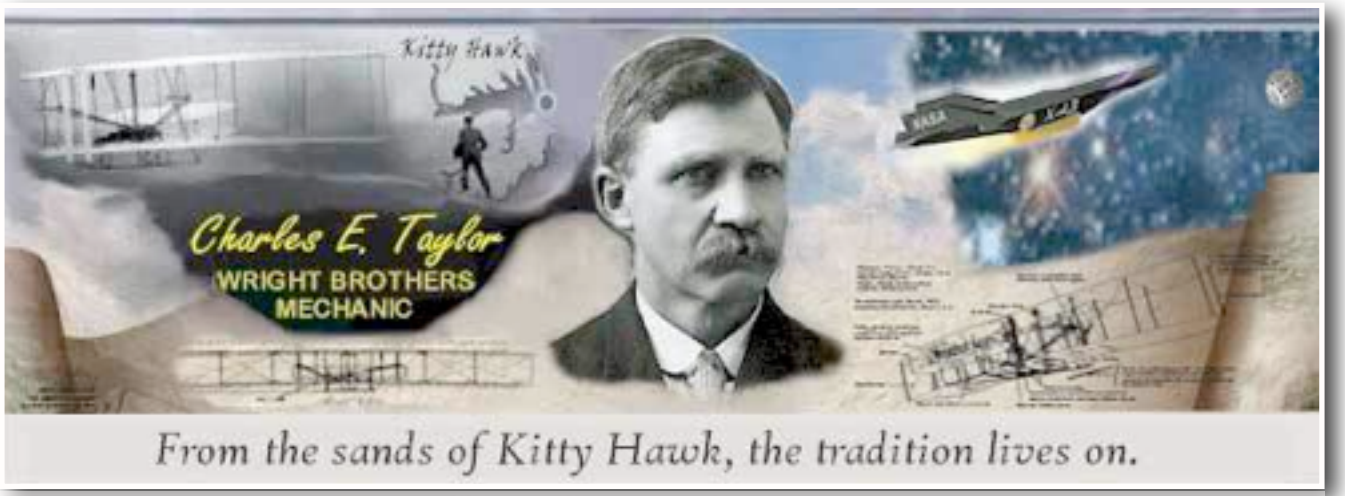
Aviation Human Factors Industry News

Volume XI. Issue 17, August 23, 2015



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:

Investigation: 2013 Dreamliner fire caused by crossed wires

The Air Accidents Investigations Branch says in a report released Wednesday that crossed and trapped wires under the battery compartment created a short circuit on the Ethiopian Airlines-operated plane parked at London's Heathrow Airport on July 12, 2013. The fire then spread to the fuselage, which is made of composite material.

Among the recommendations, the branch said the U.S. Federal Aviation Administration, together with similar bodies in Europe and Canada, should conduct a review of equipment powered by lithium metal batteries to ensure they have "an acceptable level of circuit protection."
The report follows earlier indications of the same problem aboard other 787s .

United Airlines said in 2013 that it found a pinched wire during an inspection of one of its 787s. Earlier, Japan's All Nippon Airways found damage to wiring on two Boeing 787 locater beacons.

The emergency locator transmitter is described as a metal-cased, battery-operated radio the size of a loaf of bread that activates in a crash to help rescuers find a plane.

A wire could short-circuit if it's pinched by metal and the metal cuts through the wire's insulation, exposing the part that carries electricity.

The fire at Heathrow happened just when Boeing was hoping to get the 787 out of the news. In January 2013, smoldering lithium-ion batteries on two 787s prompted authorities to ground the plane for almost four months, forcing Boeing to redesign the batteries and their chargers.

Could this Maintenance Accident Happen to You? - John Goglia

Some of you may remember the British Airways Airbus 319 aircraft that lost the fan cowl doors from both engines on take-off from Heathrow Airport two years ago resulting in damage to the aircraft and an inflight fire. Fortunately, the aircraft was able to land safely and there were no deaths or serious injuries. Many of us suspected at the time that a likely precipitating cause of the accident was improperly performed maintenance, specifically improperly latched cowl doors.Now the accident report outlining the maintenance errors – and the human factors behind them – has just been issued by the United Kingdom's Air Accidents Investigation Branch – the equivalent of the US NTSB. The accident report can be found here: https://www.gov.uk/aaib-reports/aircraft-accident-report-1-2015-airbus-a319-131-g-euoe-24-may-2013 The report contains many lessons for those of us in the aviation maintenance business, lessons we may be well aware of but haven't learned.

Reading the accident report – in particular the Human Factors Report - I can't help but ask myself, could this accident have happened to me when I was working on aircraft? It's a question well worth asking for anyone performing maintenance on aircraft today, whether as a mechanic actually performing aircraft maintenance, a supervisor responsible for overseeing that work or a manager responsible for the overall maintenance at a facility. And, of course, executives far removed from where the wrenches meet the aircraft, need to look at whether any of the policies they foster create the environment in which this type of accident can occur.

The report concludes, as many suspected at the time, that a maintenance error led to the fan cowl doors being left unlatched after scheduled overnight maintenance. But the report goes beyond the obvious conclusions and looks at the human factors that led to the mechanics leaving the doors unlatched and then failing to discover their error. Of course, contributing factors range beyond the errors of two mechanics and include airline management and the aircraft manufacturer, as the report points out. But the precipitating factors were the mechanics actions and inactions. Not surprisingly, the failure to follow maintenance manual procedures is at the heart of this accident.

Yet, at this worksite, as at many others I have seen, the failure to follow at least some required procedures was routine. Luckily for us, the two maintenance technicians involved appear to have fully and candidly cooperated in the accident investigation. Without their cooperation, it's doubtful that the human factors report would be so compelling.

I won't try to summarize the report and risk you not reading it. Hopefully, I've piqued your interest. I will say that I'm hopeful that this report will cause maintenance professionals at all levels in the aviation industry to realize that a maintenance accident like this could happen to any of us unless we heed the lessons here. Next time, however, we may not be so lucky. And the accident could result in a catastrophic crash with tremendous loss of life in the air and on the ground.

https://www.gov.uk/aaib-reports/aircraft-accident-report-1-2015-airbus-a319-131-g-euoe-24-may-2013

Pilots frustrated by delays on fatigue rules

Canada's largest pilots group says the federal government is lagging behind in updating regulations aimed at reducing pilot fatigue.

The Air Canada Pilots Association issued a statement earlier this week, criticizing the government for the delay in capping the number of hours pilots can be on the job.The association was reacting to a notice of intent recently issued by Transport Canada. In the notice, the federal agency announced it intends to make amendments to the Canadian Aviation Regulations. The amendments include:

- reducing pilots' annual flight time limit to 1,000 hours in 365 days, down from 1,200 hours in 365 days;
- Capping the daily flight duty time of a shift from between nine to 13 hours, down from 14;
- Giving pilots 10 consecutive sleep hours between flights;

- Amending the requirements needed to receive time free from duty;
- Implementing a system to recognize and manage fatigue risk.

However, the new regulations will only be in effect for large carriers, with smaller carriers being exempt. Under Canadian Aviation Regulations, a large carrier (referred to as 705 Airlines Operations) are carriers that are authorized to operate planes that have a takeoff weight of more than 19,000 pounds, or which can transport 20 or more passengers.

In the notice, Transport Canada said it plans to introduce a second phase of amendments for all air operators, but gave no specific timeline. And, with a federal election campaign underway, it's not clear what will happen to the plan.

Geoff Wall, chair of the Master Executive Council of the ACPA, said it's been frustrating for Canadian pilots, as the updates to the aviation regulations have been in the works since 2010. He also said that the federal agency only selected five out of 50 recommendations to act on.

"It's been a long struggle for us," he told CTV's Canada AM on Friday. "Five years ago we were brought in as the technical experts to improve and modernize, and bring the Canadian air regulations up to a global standard.

"That's all we're really looking for, to be on par with everybody else in the rest of the world."

One of the chief concerns is the issue of "time of day sensitivity," Wall said.

Under current regulations, pilots in Canada can be scheduled to work for 14 hours. The APCA would like to see those hours dropped to between nine to 13 hours, depending on when the work shift starts. These are the rules that carriers in the U.S. and EU follow, Wall said.

But the Air Transport Association of Canada, a group representing 85 Canadian operators, says reducing the length of a pilots' shift means the smaller carriers will have to hire more staff. It also says the changes are not necessary given Canada's excellent aviation safety record.

"We have the highest safety record in the world. We are the only country with a regulated safety management system, so I don't see why this is such a pressing issue," ATAC President John McKenna told CTV News.

Wall recognized that Canadian airlines are already safe, noting that Air Canada already operates under rules similar to the proposed recommendations. The pilots association is simply looking to match international standards, which are safer, he said.

"If an American passenger can get on an American airline, and be governed under flight duty times that are considered safe to a global standard, why can't we expect the same for a Canadian passenger getting on any Canadian airline in Canada," he said.

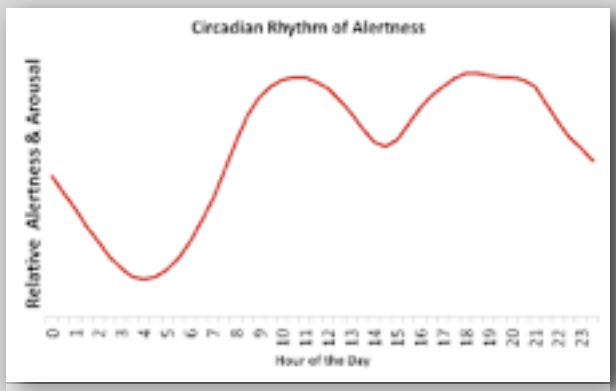
"Canadian airlines are safe, but what we are looking for is something that's safer."

http://www.ctvnews.ca/video?clipId=680639

http://gazette.gc.ca/rp-pr/p1/2015/2015-08-08/html/notice-avis-eng.php

FAA: Air Controllers Now More Alert

The FAA believes that "there is greater alertness" among staff members using updated scheduling practices following a previously hidden NASA study assessing chronic fatigue among air traffic controllers, the agency said in an Aug. 11 press release. NASA's 270-page study was originally kept secret from the until the Associated Press obtained a draft, after which the agency posted it online. On recommendations from NASA, the FAA in 2012 implemented a Fatigue Risk Management System, which changed controllers' work schedules in ways such as requiring nine hours of allotted rest when a night shift immediately precedes a day shift and allowing controllers to "self-declare fatigue and take time off" to recuperate.



http://www.faa.gov/data_research/research/media/NASA_Controller_Fatigue_Assessment_Report.pdf

JAL in quest to boost safety, 30 years after deadliest crash

Japan Airlines President Yoshiharu Ueki prays Wednesday for victims of the 1985 crash that killed 520 people.

The Japan Airlines jumbo jet crash of 1985, which killed 520 people, remains the world's deadliest single-aircraft accident ever and Japan's last fatal accident involving a commercial flight. Three decades on, the airline faces the daunting challenge of maintaining employee commitment to safety.

More than 90 percent of the company's employees were hired after the crash. And many competent employees left the company after it filed for bankruptcy in 2010.

"Humans will make mistakes, with no exceptions," says Nobuyoshi Gondo, chief of JAL's safety promotion headquarters. "Repetition (of lessons on safety) is the key to keeping employee consciousness high. There's no end to our efforts for safe flights."

In 2005, JAL received a business improvement order from the transport ministry after a series of violations, including a plane that undertook a takeoff run before it had been cleared by air traffic control, and the use of passenger plane parts for cargo aircraft. The airline then plunged into a management crisis and filed for bankruptcy protection in January 2010 under the corporate rehabilitation law.

"At the time, there was concern within the company that investment on safety measures might be reduced," Gondo says.

JAL's bankruptcy filing caused an outflow of experienced maintenance workers. That had a large impact on employees who remained with the company, says maintenance worker Ko Misawa, 46, who is involved in educating young employees.

But he has also seen a change for the better, noting that the business improvement order encouraged active interactions among employees across different lines of work.

“Members of my staff have come to report any mistakes without hiding them, which I’m proud of,” Misawa says. “I’m telling my younger colleagues that they will be allowed to regard themselves as fully qualified workers if they remember the faces of their loved ones when they feel hesitant.”

“The issues of cost-effectiveness and flight punctuality should be based on safety,” said JAL President Yoshiharu Ueki. “We mustn’t allow the accident to be forgotten. There’s no end to our efforts to raise the awareness of employees.”

Thanks to advances in technology, contemporary aircraft are equipped with devices to avoid crashes and getting too close to the ground. The engine system has also been improved.

Following the JAL accident, Boeing 747s have been redesigned so they won’t lose control even if their oil pressure is lost in the event the airplanes are damaged. In the 1985 crash, the aircraft went out of control as a result of a total loss of hydraulic pressure.

The deadly crash also prompted Japan’s major carriers ,JAL and All Nippon Airways, to enhance safety training programs in an effort to avoid major accidents in future. The carriers’ guidelines for evaluating the mental and physical health of their pilots are also believed to be the world’s strictest.

JAL created new internal sections, including the safety promotion task force, in 2005 and 2009 in response to proposals by an expert safety advisory group.

In 2012, JAL started safety education for all 35,000 group employees, under which each of them wrote a declaration of commitment to safety on a card that they are advised to carry with them.

In 2006, JAL disclosed to the public parts and components of the crashed aircraft, following years of requests from victims’ families. The broken aft pressure bulkhead and the vertical tail fan are among the aircraft debris on display at the Safety Promotion Center, located near Tokyo’s Haneda airport.

JAL has gradually increased the range of items on display, and set up a library room in 2013. In addition to public viewing, it is used for safety education for JAL employees.

It has started projects to raise employee awareness about the importance of safety, including the climbing of Mt. Osutaka, the crash site in Gunma Prefecture, north of Tokyo, to remember the victims.

At a dialogue forum launched last year, victims' family members urged JAL employees to put into their work what they feel during the memorial visits to Mount Osutaka.

"The effort would end up meaningless unless every employee changes their attitude (toward safety)," says Kuniko Miyajima, the 68-year-old secretary-general of victims' family group 8.12 Renraku-kai.

According to the Japan Transport Safety Board, the number of aircraft accidents is decreasing, dropping from 39 in the decade from 1985 and 1994 to 32 in the decade from 2005 through 2014.

But a near collision that took place at Naha Airport in Okinawa Prefecture in June, involving two commercial planes and a military jet, has shown the need for continued improvement in aviation safety.

A passenger aircraft operated by ANA, carrying 83 passengers, nearly caused a pile-up on the airport's runway when a Air Self-Defense Force helicopter flew across its path on June 3. The pilot of the military aircraft reportedly misunderstood that the takeoff was meant for the ANA plane, while another passenger jet landed despite instructions to circle around again.

And the fatal crash of a small private aircraft in Chofu, western Tokyo, in July left three people dead. It was intended to be an "orientation flight" to maintain the pilot's proficiency. But the plane crashed into a residential area and burst into flames shortly after takeoff.

"Private and public sectors in Japan have long worked together to ensure safety in flights. But it's not like there is a specific protocol that, if put into practice, would guarantee safe flights," said Hiroyuki Kobayashi, a former pilot for JAL. "It is vital to take all possible measures to bring the number of fatal accidents to zero."

NTSB: Carburetor Cited In Harrison Ford Accident

A carburetor malfunction led to the loss of engine power in the Ryan PT-22 flown by Harrison Ford when he made a forced landing in March, the NTSB said Thursday in its probable cause report.

The board also cited faulty shoulder harness hardware that contributed to Ford's multiple injuries. The actor and pilot was hospitalized after the accident, which occurred March 5 after taking off from Santa Monica Airport. Shortly after departing Runway 21, he reported mechanical problems to ATC and asked to turn back. He made a left turn back to the field, but struck a tree and the Ryan landed on its belly on a golf course, sustaining heavy damage.The engine failure occurred "during initial climb when the carburetor main metering jet became unseated, which led to an extremely rich fuel-to-air ratio," according to the NTSB's report. "Contributing to the accident was the lack of adequate carburetor maintenance instructions. Contributing to the severity of the pilot's injuries was the improperly installed shoulder harness." The NTSB's narrative on its investigation said the airplane underwent a full restoration and engine overhaul in 1998, which included a new float and gasket for the carburetor. The plane had accumulated about 169 hours since then. The instruction manual for the carburetor "revealed that there were no pertinent instructions regarding the installation or continued maintenance of the jet assemblies. Further, no maintenance entries were located in the engine logbook regarding carburetor inspections since overhaul," the report said. Investigators also found that an attach bolt for the pilot's seat belt, which had pulled off, was not properly reinforced.

http://www.ntsb.gov/_layouts/ntsb.aviation/brief.aspx?ev_id=20150305X93207&key=1

http://www.ntsb.gov/_layouts/ntsb.aviation/brief2.aspx?ev_id=20150305X93207&ntsbno=WPR15FA121&akey=1

Water In Fuel Blamed For Just Aircraft SuperSTOL Crash

Just Aircraft says water in the fuel caused the loss of their demonstrator SuperSTOL aircraft on Aug. 2. Company founder Troy Woodland was at the controls when the aircraft went down shortly after takeoff at the company's home base of Walhalla, South Carolina. Although the aircraft was destroyed, Woodland and his unidentified passenger were uninjured. In a news release, the company said the aircraft had been flown previously the same day and performed normally."Woodland had pre-flighted and flown the aircraft earlier in the day and added fuel just before takeoff," the company said in a news release. "It was learned later that the fuel he added had water in it. Right after takeoff he experienced a serious reduction in power, then a brief surge, after which the engine died." The accident hasn't been posted on the NTSB database site yet. As the name suggests, the SuperSTOL is a lightweight kit airplane aimed at the backcountry market. It employs numerous lift and low-speed control enhancing features, including automatic leading edge slats and massive flaps and ailerons. It's designed to handle a variety of engines in the 100-horsepower range.

Paul Dye, editor of our sister publication KitPlanes, reviewed the airplane in 2013 in this video.

Block pitot tube contributes to crash

The pilot reported that during the takeoff roll in Mackinac Island, Mich., the Cessna 182T visually appeared and felt to be accelerating normally, but the airspeed indicator never increased above 40 knots. He aborted the takeoff when the plane was halfway down the runway.

He used brakes to decelerate, but the 182 was skidding on the wet runway. He was unable to stop and went off the runway and hit a wood fence, which resulted in substantial damage to the right elevator.Examination of the airplane found the pitot tube was filled with debris. According to the operator, the airplane was not equipped with a pitot tube cover.

The NTSB determined the probable cause as the pilot's delayed response to abort the takeoff, which resulted in an excursion and collision with a fence. Contributing to the accident was the pilot's failure to check the pitot tube for debris during preflight.

NTSB Identification: CEN13CA469

This August 2013 accident report is provided by the National Transportation Safety Board. Published as an educational tool, it is intended to help pilots learn from the misfortunes of others.

Almost 200 banner planes have crashed • Low altitude, tricky hitch mechanism, add complications

Nicholas Baer, 12, planned to spend his Fourth of July body boarding with friends at Carlsbad State Beach, but plans changed about an hour into the visit. There's been a plane crash, a family friend told the boy's mother on the phone.

"I think he got hit in the head by the propeller," the friend said.

The aircraft was a Piper PA18 towing an advertising banner, and a federal report about the crash is expected this week. Meanwhile, U-T Watchdog decided to check and see how common such crashes are.

Accidents involving “banner towing” are tracked by the Federal Aviation Administration and the National Transportation Safety Board.

Records show that there have been 25 aircraft accidents involving such planes in California over the past two decades, and more than 62 percent resulted in injury or death. Four accidents occurred in San Diego, and eight in Los Angeles County.

Aviation experts say banner flying isn't necessarily dangerous, but planes do fly at low elevations — usually above crowded areas — and the drag from towing a banner can put strain on the single-engine planes, which are typically used to fly advertisements.

In May 2012, a Cessna 150 towing a banner crash landed in San Diego Bay because of a mechanical malfunction. No one was injured.

According to reports from the NTSB that conducted an investigation of the incident, “both occupants reported that they did not have time to troubleshoot, due to low altitude.”

Incident records show that advertisements in the air can also distract surrounding pilots. Following a 2003 incident near Pearland, Texas, a pilot admitted to NTSB investigators that he was distracted while landing by banner towing activity adjacent to the runway. The pilot landed at the edge of the grass runway and struck a ditch, causing substantial damage to the plane.

Cities including Huntington Beach and San Francisco have attempted to ban aerial ads in recent years for safety reasons or aesthetic purposes, but dropped the efforts in fear of lawsuits or pressure from the FAA, which regulates all flight activity.

The cause of other California accidents vary. About a quarter were due to engine failure, records show, and more than half occurred while cruising or maneuvering the aircraft.

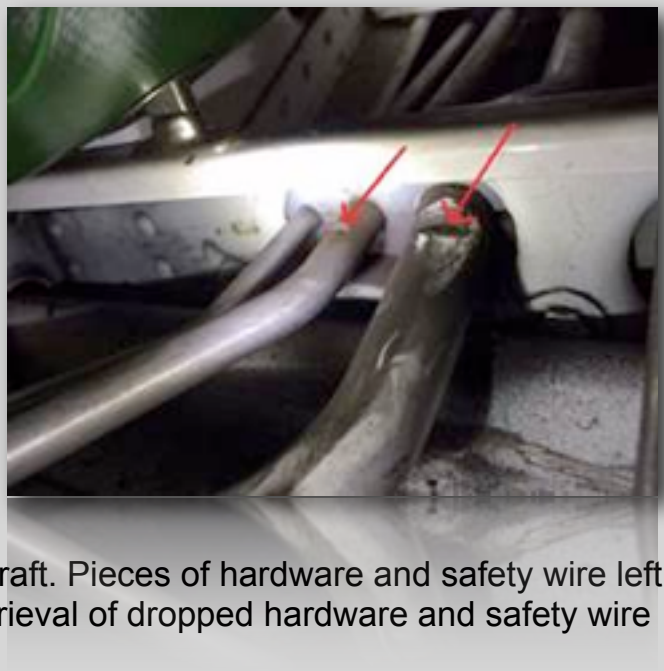
“Cars quit on a freeway. Cars sometimes fail to start,” said Barry Bardack, chief flight instructor for the Golden State Flying Club at Gillespie Field in El Cajon. “Airplane engines have an amazing ability to revive mid-air, but they also occasionally fail.”

Air Ads owner Jim Oakley declined to comment on the crash or identify the man flying the aircraft, but said the pilot was licensed to fly commercially and had the required qualifications to tow banners.

Oakley said his staff tends to be young, about 26 years old, since banner towing is a way for aspiring pilots to rack up flight time and advance to a career flying commercially.

How a socket extension nearly took out the main hydraulic system on a Hawker aircraft.

A Hawker recently arrived at Dunan Aviation for a pre-purchase evaluation. During the general visual inspection in the rear bay, an airframe technician noticed a socket extension lying across several hydraulic lines. When the extension was removed, two hydraulic lines were found to be more than 75% chafed through. If this would not have been caught in time, the extension would have eventually chafed through the lines and depleted the main hydraulic system. An effective Tool Control/FOD system would have most likely prevented this potentially costly failure. The potential for a problem is not limited to tools being left in the aircraft. Pieces of hardware and safety wire left in an aircraft also pose a hazard. Retrieval of dropped hardware and safety wire clippings is essential.



Having an inventory of tools prior to starting a task and ensuring that all tools are accounted for at the end of the task or at the end of the work day is the best way to ensure that no foreign objects are left in the aircraft.

Wildlife strike reporting continues to increase

Wildlife strike reporting for both commercial and general aviation airports continues to increase, according to a new report by renowned wildlife expert Dr. Richard A. Dolbeer. At the request of the Federal Aviation Administration (FAA), Dolbeer recently published the **wildlife report (PDF),** which shows that 47 percent of the wildlife strikes that occurred from 2009 to 2013 were reported to the FAA's National Wildlife Strike Database. That number is up from 42 percent for the previous reporting period of 2004 to 2008.The report concludes that the FAA's proactive continuing outreach actions with its aviation industry and government partners have improved the quantity and quality of voluntary wildlife strike reporting. The report also highlights a decrease in the number of damaging strikes, greater reporting of birds of all sizes, and the decrease of damaging strikes within the airport environment. Other findings note a decrease in the average bird size involved in strikes, and an increase in the number of reports that identify the bird species.

The report concludes that the level of reporting is adequate to track national trends in wildlife strikes, so mandatory reporting is not necessary at this time. It also provides a scientific basis for the FAA to develop policies and guidance to mitigate wildlife strikes; and the reporting process complies with International Civil Aviation Organization standards.

View the Strike Reporting Trends (1990-2013) Report.

http://www.faa.gov/airports/airport_safety/wildlife/media/trends-in-wildlife-strike-reporting-1990-2013.pdf

FAAST Blast — Week of Aug 10 – Aug. 16, 2015 Biweekly FAA Safety Briefing News Update

#FlySafe and FRATernize Before Your Next Flight

Every flight has some level of risk. It's up to the airman to review that risk in advance and then develop the appropriate risk mitigation strategies. One of the best ways of doing this is by using a Flight Risk Analysis Tool or FRAT. FRATs are generally easy-to-use, visual tools that can help pilots proactively identify hazards and make better go/no go decisions for every flight. Using a FRAT to put everything on paper allows you to graphically depict risk limits free from the pressure of an impending flight or maintenance task. It also sets the stage for managing risk through proactive mitigation strategies that are documented.

The FAA Safety Team (FAAST) has produced an easy-to-use FRAT — found here http://go.usa.gov/3sJWA — that will get you started in effective safety risk management. The FAAST FRAT is a simple automated spread sheet that will run on a Windows or Mac system. Just download the appropriate file for your computer and you're in business. For more on FRATs, check out our safety flyer here: http://go.usa.gov/3sJZw, as well as this month's #FlySafe campaign page at http://go.usa.gov/3sJKP.

"Dark Side" of Travel, Such as Jet Lag, Ignored

Researchers from the University of Surrey and Lund University (Sweden) investigated how frequent, long-distance travel is represented in mass and social media. They found that the images portrayed do not take into account the damaging side effects of frequent travel such as jet lag, deep vein thrombosis, radiation exposure, stress, loneliness,

and distance from community and family networks.Instead, the study found that those with “hypermobile” lifestyles were often seen as having a higher social status. By assessing how first-class flights, “must-see” destinations and frequent-flyer programs are represented, glamorizing hypermobility as exciting, appealing, and exclusive, the study shows how the “dark side” of travel is ignored.

“A man in a sharp suit, reclining in a leather chair, laptop open in front of him, a smiley stewardess serving a scotch and soda. This is often the image of travel, particularly business travel portrayed in TV ads and glossy magazines. But there is a dark side to this ‘glamorized’ hypermobile lifestyle that the media, and society ignores,” says lead author Scott Cohen, PhD, from the University of Surrey, in a release. “The level of physiological, physical, and societal stress that frequent travels places upon individuals has potentially serious and long-term negative effects that range from the breaking down of family relationships, to changes in our genes due to lack of sleep.

“It is not only traditional media that perpetuates this image. Social media encourages competition between travelers to ‘check-in’ and share content from far-flung destinations. The reality is that most people who are required to engage in frequent travel suffer high levels of stress, loneliness, and long-term health problems. There are also wider implications for the environment and sustainability. In this context, hypermobility seems far from glamourous.”

The researchers call for more discussion on the adverse effects of hypermobility, to realistically reflect the negative impact of frequent and long-haul travel. “Society needs to recognize that the jet-set lifestyle is not all it’s made out to be. By striving to travel far, wide and frequently we are damaging the environment, ourselves and potentially our closest loved ones,” says Cohen.

Say goodbye to jet lag with a new mask that rearranges your body clock

Traveling around the world is brilliant – you can meet amazing people, be exposed to new cultures and explore beautiful places.

What’s not so great is jet lag, when all you want to do is crawl into a ball in your hotel bed and wait for the confusion, nausea and tiredness to pass you by.

The Polish creators behind NeuroOn hopes to cure all that.

It's an intelligent mask that measures sleep waves, eye movement, muscle tension, heart rate, and blood saturation to help you get the most from you sleep.

Using an app on your phone or tablet, NeuroOn analyses all that information to calculate the optimum length of time for you to be asleep and when to wake you up so you feel at your most refreshed.The mask also uses innovative bright light therapy to manipulate your sleep pattern, with short bursts of light that effect your natural body clock.

By using jet lag settings on the mask when sleeping before, during and after flying your body should adjust to the time difference much quicker.

Whilst the science world is still debating how beneficial waking up during different stages of your sleep cycle is, a study by researches at the University of Stanford found that bright light therapy definitely can be used to manipulate sleep patterns.

It looks like we can finally wave jet lag goodbye at the airport gates – if you can afford the $299 price tag that is.Top tips to prevent jet lag

- Prepare yourself before you go – if flying east, try going to bed and waking up earlier, if flying West stay up and wake up later
- Instead of flying overnight, arrive in the evening so there's less time between landing and bed
- Try to leave out caffeine and alcohol when settling in as both interfere with sleep
- Dehydration can intensify effects of jet lag so keep topped up with water
- Spend time in natural light when you arrive, it will help your body adjust faster

https://neuroon.com/

http://www.ncbi.nlm.nih.gov/pubmed/25227334

The Movement Away from a Zero-Injury Culture

For several years now, the workplace safety industry has seen a slow but growing movement away from a zero-injury goal toward the development and promotion of a culture of safety based upon targeted training, informational outreach, and the minimization of unsafe behaviors.

Why all the fuss about semantics? Critics of the zero-injury goal point out that language used to market safety goals to workers has a direct effect on the formation of their safety values, beliefs, and actions. Safety experts warn that the focus on "zero" drives anxiety and fear among workers while fostering an intolerant, non-learning environment.

Those in favor of zero-injury culture argue that any other injury goal would be ethically unjustifiable, signaling to the workforce that corporate profits outweigh concerns over safety.

The Problem of Underreporting

One of the biggest criticisms of the zero-injury goal is that it encourages and incentivizes — intentionally or unintentionally — the underreporting of injury data. While it's impossible to quantify the extent of underreporting, there has been an increasing number of media reports over the past several years, as well as notable concern from the OSHA.

Holding organizations and workers to a zero-injury standard leads to the underreporting of near misses and seemingly minor incidents, which are prime opportunities for developing additional training — the foundation of prevention.

Focusing on the Means Over the End

Everyone wants zero injuries. But safety campaigns built around "zero" have led to unintended consequences and suppressed the opportunity for real strategic safety discourse. The movement away from zero is not indicative of an unfeeling safety industry, but more a practical shift in focus from the end goal to the behavioral means of achieving that goal.

"Zero injuries is the byproduct of the value of safety excellence; it should never be the primary goal," Shawn M. Galloway wrote in the February 2015 issue of *Occupational Health & Safety*. "Don't allow the focus to become slogans without strategy."

This sentiment is echoed by the OSHA, which has voiced concern about safety incentive programs that reward workers for "zero" accidents over a given period of time. If an employee's injury leads to his or her entire team missing out on a bonus, prize, or other incentive, it's no wonder that it may never come to light. The OSHA instead recommends celebrating them displaying safe behaviors:

"These incentive programs can discourage employees from reporting injuries because they want to receive the reward," says OSHA Assistant Secretary of Labor Dr. David Michaels. "Good incentive programs feature positive reinforcement when workers demonstrate safe work practices and when workers take active measures such as reporting close calls, abating hazards, and using their stop-work authority to prevent a workplace tragedy."

What sounds like a minor change in perspective could actually have major implications. It transitions the workplace from a culture of fear to a culture of reinforcement and realigns incentives to reward behavioral excellence of individuals.

Moving the Needle

Tracking these type of macro-level cultural changes is not easy, but one dramatic shift can be seen in the sales trends of the workplace safety promotional industry. "Zero Injuries" was once the most popular safety slogan for banners, posters, and other promotional products, but there's been a decline in recent years.

"We've seen a noticeable sales trend away from zero-injury products toward more specific behavioral themes," said Roy Ryniker, president of Positive Promotions, a company that creates promotional and educational materials. "Over the past three years, our zero injury banners are being outsold three to one by more targeted informational safety banners."

Beyond these banners, the company no longer carries zero-injury themed products (such as lunch bags, shirts, etc.) due to their lack of popularity. Instead, companies such as Positive Promotions are seeing a thematic shift toward products that focus on the safety behavior of individual workers and teams. A comment from a customer survey conducted by the company seems to echo this shift: "I am a strong proponent of moving away from the zero injury goal. I believe and have witnessed that it inadvertently drives underreporting of injuries."

Does declining sales of "zero injury" banners signal an industry-wide shift? Not necessarily. But a movement away from zero does appear to be occurring. Though the OSHA has not explicitly rejected the zero-injury emphasis in workplace safety, its campaign against improper incentive programs may be driving organizations away from zero messaging toward posters, banners, and safety campaigns that push for positive reinforcement and a team-focused climate of learning.

http://www.safetyrisk.net/zero-harm-2/

https://www.osha.gov/as/opa/whistleblowermemo.html

http://ohsonline.com/articles/2015/02/01/if-zeros-the-goal.aspx

http://www.positivepromotions.com/

TED: Ideas Worth Spreading

Sergei Lupashin: A flying camera ... on a leash

Let's admit it: aerial photo drones and UAVs are a little creepy, and they come with big regulatory and safety problems. But aerial photos can be a powerful way of telling the truth about the world: the size of a protest, the spread of an oil spill, the wildlife hidden in a delta. Sergei Lupashin demos Fotokite, a nifty new way to see the world from on high, safely and under control.

https://www.ted.com/talks/sergei_lupashin_a_flying_camera_on_a_leash