

# Aviation Human Factors Industry News

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

Hello all,

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## CASA Resources: "Human Factors"

ARSA staff continually search for resources, guides, and tools that might be useful for our members as they work to ensure global aviation safety. Today's installment comes from the Land Down Under via the Australian Civil Aviation Safety Authority.



### Human Factors

The term human factors refers to [a wide range of issues](#) that affect how people perform tasks in various environments. Whether a technician is performing line maintenance, a comprehensive avionics check, or at home preparing dinner for family, there are a variety of social and personal skills that complement the necessary technical acumen for appropriately completing their work. By fully exploring and understanding the [human capabilities and limitations](#) involved in maintenance operations, your business can develop the best possible fit between your people and the technical systems in which they work.

### CASA Resources

CASA's [Human Factors in Engineers resource kit](#) contains a series of guides, workbooks, and videos designed to provide a strong focus on human factors training within the aviation environment. This content includes:

- A variety of useful models (including PEAR—People, Environment, Actions, Resources) for managing human factors in maintenance
- A series of practical examples
- International regulatory requirements (including FAA documents),
- Strategies for mitigating problems

### Praise from the FAA

Recently the Federal Aviation Administration's chief technical and scientific advisor, Dr Bill Johnson, praised CASA's human factors training resources. "I have never seen a more professional and comprehensive package," Mr Johnson said. "It is the [new international yardstick](#) (or metric ruler) by which other human factors training programs will be measured."

To access the resource kit: [click here](#).

To access CASA's full list of online offerings: [click here](#).

## **Air Safety Oversight: Who's Responsible?**

by John Goglia

Recent media reports of a near mid-air collision over the Pacific Ocean between Los Angeles and Hawaii involving two Boeing 757 aircraft, one operated as United Airlines Flight 1205 and the other an unidentified US Airways flight, began with a blog posted by a passenger on board the United Airlines aircraft. An interesting observation that the blogger made after researching the incident was that he found it shocking that the “[airlines are essentially self-policed](#).”



In fact, he is correct. The airlines and essentially all of aviation safety depend on self-policing or voluntary compliance as the FAA prefers to call it in its [Compliance and Enforcement Handbook](#). The system really couldn't function any other way. I thought a few statistics from the FAA's aviation data website would illustrate the point. The FAA's US Civil Airmen Statistics includes the latest estimated number of active certificates as of 12/31/2012:

**Pilots:** a total of 610,576, with 116,400 holding commercial certificates and 145,590 holding airline transport certificates. The rest include general aviation and student pilots.

**Non-pilots:** a total of 701,291, of these 337,775 aviation mechanics, 21,862 aircraft dispatchers, and 172,357 flight attendants. The rest include repairmen, parachute riggers and flight engineers.

**The FAA Aerospace Forecast FY2014-2034, includes the following estimated data for 2013:**

- 15 scheduled mainline air carriers flying passenger jets over 90 seats
- 63 regional air carriers flying smaller piston, turboprop and regional jets up to 90 seats
- 30 all-cargo carriers flying domestic and/or international cargo.

According to this Forecast report, estimated 2013 domestic enplanements by US air carriers in a fleet of 6,727 aircraft totaled 498.8 million passengers for mainline air carriers and 155.5 million for regional airlines. The active general aviation fleet is estimated in 2013 at 202,865 aircraft with an estimated total flight hours of 24.0 million.

Activity at 516 FAA (264) and contract (252) towers totaled 49.9 million operations.

These statistics are just a few related to the aviation system in the United States that the FAA is nominally responsible for overseeing. Against that staggering picture of aviation activity, is the handful of FAA inspectors responsible for managing oversight of the system: according to the latest FAA report to Congress on its workforce numbers, the aviation safety organization reports 6398 safety critical staff positions.

So, of course, the safety of the aviation system does depend to a tremendous extent on “self-policing”. [And the accident data indicate that overwhelmingly, self-policing has working remarkably well.](#) This doesn’t mean that I don’t have concerns about the accident data making us complacent but no one in the public should be shocked or dismayed that the system depends on voluntary compliance.

## **NTSB Reports on 78 Agriculture Aircraft Accidents in 2013**

The National Transportation Safety Board has issued another report about the safety of agricultural aircraft operations, and it contains new recommendations for the [FAA](#) and the [National Agriculture Aviation Research & Education Foundation](#). The

recommendations to both organizations ask that [they work together to develop and distribute guidance on](#) fatigue, fatigue management strategies, and scheduling practices in order to "help reduce the likelihood of fatigue, dehydration, hunger, and other physiological factors that can negatively affect a pilot’s concentration, decision-making, and performance.





"The report says 802 agricultural aircraft accidents occurred from 2001 through 2010, including 81 fatal accidents. The industry's 10-year average total accident rate **is higher than** the 10-year average total accident rate of U.S. general aviation, it states.

The report focuses on 2013 accidents – a year when NTSB investigated 78 aircraft accidents involving some aspect of agricultural operations; nine of them were fatal accidents that killed a total of 10 people. Sixteen of the accidents **involved in-flight collisions** with obstacles such as power lines, guy wires, trees, and meteorological evaluation towers.

**The report cites** fatigue, inadequate aircraft maintenance, lack of operations-specific risk management guidance, and lack of guidance for pilot knowledge and skills tests as safety issues these accidents have highlighted.

Many agricultural pilots who were involved in some of the 2013 accidents said they typically work more than **12 hours** during the busy season (summer, for most operators), and one pilot reported flying **10-11 hours per day**, according to the report.

<http://www.nts.gov/safety/safetystudies/SIR1401.html>

<http://www.agaviation.org/content/national-agricultural-aviation-research-education-foundation>

## **FAA Administrator Huerta Launches Personal Appeal to GA**

"The 2014 flying season is here! **Are you prepared** for the weather this flying season?" asked FAA Administrator Michael Huerta in a message to GA pilots in the kickoff of the FAA's new Got Weather (#GotWx) campaign. The 8 month campaign works with numerous stakeholder groups to drive GA pilots to any resources that might help them deal with weather.



“Weather is the most lethal of all major causes of GA accidents.

According to the Aircraft Owners and Pilots Association (AOPA), nearly 75% of weather-related accidents are fatal.” Huerta explains. The FAA and stakeholder groups are inviting you to get involved via social media by using the #GotWx tag on twitter and helping get the word out.

For more information on #GotWx please visit: [http://www.faa.gov/about/initiatives/got\\_weather/](http://www.faa.gov/about/initiatives/got_weather/)

[http://clicks.aweber.com/y/ct/?l=N85e\\_&m=3WCHc.9HMy2m2A4&b=RmEMUeAPof4V11HQ1qC2Rw](http://clicks.aweber.com/y/ct/?l=N85e_&m=3WCHc.9HMy2m2A4&b=RmEMUeAPof4V11HQ1qC2Rw)

## **A Deflated Ending**

A 747 aircraft had a Captains airspeed indicator replaced, which required that the Pitot /Static system had to be checked. The technician connected the Pitot/Static tester to the aircraft and applied the necessary pressures so as to simulate a 3000 foot altitude and a reading of 250 knots.

An inspector was assigned to witness to test and observed from the cockpit that the airspeed indicator indeed did read 250 knots and the altimeter read 3000 feet. After the required waiting time the indications held and there was no sign of a leak. The leak check was completed and the test equipment was removed. The item was signed off and the aircraft was certified as airworthy. The aircraft was fully loaded for flight and preceded to the taxiway for takeoff. As the aircraft began its takeoff run and was increasing its speed down the runway, when the Captain noticed that the Airspeed indicator on the Captains side was not showing any airspeed. The Co-pilots airspeed indicator was showing the necessary airspeed for lift off.



The captain aborted the takeoff and applied the brakes and reversed the thrust in order to stop the aircraft. This sudden stoppage resulted in overheating of all the main wheels and causing [all 16 tires to deflate](#). Emergency equipment was summoned to provide foam to cool down all the wheel assemblies. The passengers were off loaded and the aircraft was towed to the hanger after all 16 wheels were changed.

Troubleshooting the defective airspeed indicator was performed and it revealed the indicator's Pitot line [was not connected](#). **“HOW CAN THIS HAPPEN WHEN THERE WAS A LEAK CHECK PERFORMED?”**

The technician was asked to demonstrate how he conducted the test. It became obvious that he did not perform the test correctly. Instead of applying the Pitot pressure independently first and checking that the airspeed registered 250 knots, he applied [Pitot AND Static pressures at the same time](#) in order to see 3000 foot altitude and 250 knots.

**Note: If you apply a Static pressure only to an airspeed indicator equal to 3000 foot of altitude, the airspeed indicator will read 250 knots.**

So as the inspector in the cockpit [“thought”](#) that there was Pitot and Static applied to the indicator in making his inspection. There was only the static pressure that was giving him the reading of 250 knots and 3000 feet of altitude.

[The lesson here is](#) that the Pitot / Static systems are separate systems and must be checked separately. You first must check the Pitot system independently and then and only then check the Static system...

## **NTSB Determining Probable Cause of Asiana Crash** **June 24**

probable cause

The National Transportation Safety Board has scheduled a June 24 meeting to [determine the probable cause](#) of the July 6, 2013, crash of Asiana Airlines Flight 214 while on approach to San Francisco International Airport in California. The aircraft, a Boeing 777, struck a seawall at the end of runway 28L at 11:28 a.m. local time, crashing onto the runway and catching fire. Three of the 291 passengers on board died and more than 180 other passengers and crew members were injured.

The meeting will begin at 9:30 a.m. EDT and will take place in the NTSB Board Room and Conference Center, 429 L'Enfant Plaza SW in Washington, D.C. It will [be available as a live webcast](#), as well; the link to the webcast will be available here shortly before the start of the meeting. NTSB held an investigative hearing about the crash in December 2013. Asiana Airlines, the Asiana Pilot Union, Boeing, the FAA, and the city and county of San Francisco were parties to the hearing, which focused on topics that included Boeing's [design philosophy](#) for the B777 as it relates to awareness of airspeed/energy, Asiana's [pilot training](#) on B777 automated systems and its training on performing [visual approaches](#), how the Korean government oversees Asiana's training program, the effects of automation on [pilots' workload, and common errors](#) associated with pilots' use of flight deck automation.

<http://www.capitolconnection.net/capcon/ntsb/ntsb.htm>

## **2009 plane crash in Kingston could have been avoided - report**

A report on the 2009 crash of an American Airlines plane in Kingston says the accident [could have been avoided](#) if the flight crew had not ignored certain precautions and if the pilots had received adequate training in tailwind landing.

Some 148 passengers [narrowly escaped death](#) on December 22, 2009 when American Airlines Flight 331, flying from Miami to Kingston, overshot the runway at the Norman Manley International Airport and came to a stop inches from the sea just off the Port Royal main road.

Almost five years later, the Jamaica Civil Aviation Authority has released the report on the investigation into the incident.



Almost five years after the incident, the report has documented [a wide range of issues](#) that it says contributed to the crash on a wet and rainy night.

[According to the report](#), the flight crew did not make themselves familiar with all the available information before departing Miami.

It says the flight crew did not give any consideration to the expected landing conditions in Kingston before departing from Miami.

The report says there is no evidence that the flight crew showed any concern about the runway conditions until just before landing.

The report concludes that this shows that the flight crew's [Situational Awareness](#) before departure was incomplete, partly due to the inaccurate information given to them.

In aviation, situational awareness is a term used to describe a person's awareness of their surroundings, the meaning of these surroundings, a prediction of what these surroundings will mean in the future, and then using this information to act.

However, the report says this awareness was low and as a result, the crew could [not accurately predict](#) possible landing conditions and make the appropriate adjustments.

Meanwhile, the report notes that information relayed to the flight crew informing of the adverse weather and that the runway at the Normal Manley International airport was wet [were not acted on](#).

The report has revealed that the flight crew were focused [on several other issues](#) including getting the plane within the approved landing weight requirement during what it calls the late stage of the immediate approach.

According to the report, until the air traffic controllers indicated to the pilots that the runway was wet, they were proceeding as if the runway was dry and using autobrakes.



Even with this, the crew reportedly was **not concerned** since there were no reports on any action taken.

The report said the crew was proceeding with **some level of complacency**, landing in rain with a tailwind.

<http://jamaica-gleaner.com/pages/american-airline-final-report/>

<http://go-jamaica.com/news/reenactment-updated.html>

## **Navy skipper faulted in fatal crash**

### **Helicopter loss, 2 deaths in Red Sea accident blamed on lack of caution**

Navy helicopters fly past the USS Midway Museum during the memorial service for downed pilots Lt Cmdr. Landon Jones and Chief Warrant Officer Jonathan Gibson

A Navy investigation released Monday **lays some blame** on the former skipper of a San Diego destroyer for a September helicopter crash that killed two pilots.

Cmdr. Jana Vavasseur was pushing her ship too hard on a windy day in the Red Sea, leading to a series of sharp rolls and a wall of water crashing onto the flight deck, the U.S. Pacific Fleet report concludes.

The seawater swamped a San Diego-based helicopter that had just landed on the William P. Lawrence. In the space of 10 minutes, the helicopter's off-balance rotor blades caused the aircraft to break apart, slide loose from its chains and slip overboard.

The bodies of the two people inside, Lt. Cmdr. Landon Jones and Chief Warrant Officer Jonathan Gibson, **were not recovered**.



Vavasasseur's "actions contributed to the loss of life, loss of an aircraft, and damage to the ship," according to a letter signed by the U.S. Pacific Fleet commander, Adm. Harry Harris.

"While conducting flight operations, she maneuvered at flank speed (more than 30 knots) and [did not fully assess the environmental factors](#). She unnecessarily assumed [increased risk](#) during the helicopter evolution, which was unwarranted given the operational circumstance. ..." Harris wrote.

"In this instance, the commanding officer did not exercise the highest degree of judgment, seamanship or prudence."

However, there was no suggestion of criminal wrongdoing. In fact, others involved in the investigation said the ship's skipper was operating within guidelines.

The Navy took administrative action against her in the form of a counseling letter.

Vavasasseur, a 1994 Naval Academy graduate, turned over command of the destroyer on schedule in December. She now works on the staff of the Coronado-based admiral in command of the Navy's surface ships

The report says that Vavasasseur -- who was on the bridge of the William P. Lawrence when the helicopter landed -- [was trying to follow orders](#) to make "best speed" to meet the aircraft carrier Nimitz in order to relieve another escort ship.

She declined to comment Monday.

The families of Gibson and Jones, who belonged to a North Island Naval Air Station squadron, also chose not to make any remarks.

While the Pacific Fleet commander had harsh words for Vavasasseur's decision making, lower-level officials in the investigation did not fault her and concluded that she [had followed procedure](#).

Noted in the report is the known danger of landing helicopters on Arleigh Burke-class destroyers, which have only a moderate distance between the water line and the flight deck.

An early version of the report suggests that the Navy look into changing operating procedures or modifying these destroyers -- such as adding solid nets to deflect water.

The Pacific Fleet commander ordered a safety "stand down" by May 30 for all helicopter commands, frigates and destroyers to address the dangers of ["seawater intrusion"](#) during helicopter operations.

His letter also acknowledges that some might find his judgment "harsh and uncompromising" and that the Navy may not have given Vavasasseur -- and by extension other ship captains -- [the proper preparation by teaching the lessons of prior mishaps](#).

Vavasseur was “ill served by us, who did not provide her all necessary information and training for a thorough operational risk management calculus,” Harris writes.

But, he adds, “I expect more from my commanding officers than simply the ability to stay within the written operating parameters.”

#### Deadly sequence of events

- Helicopter lands on deck of the destroyer William P. Lawrence and is “chocked and chained” to flight deck
- Bridge changes course from 130 degrees to 190 degrees, then 195 degrees, putting ship sideways to waves.
- Ship takes a large roll to port (the left) followed by a larger roll to starboard (the right.)
- Wall of water hits destroyer’s right rear side, impacting turning rotor blades and pushing them down, possibly smacking them into helicopter itself.
- Tail breaks off and helicopter shakes violently.
- Helicopter breaks free of chocks and chains.
- Both pilot doors come off.
- Helicopter moves forward and right, while rotor blades and other parts of the helicopter hit flight deck and surrounding ship structures.
- Destroyer takes another strong roll to left.
- Helicopter continues moving. Rotor blades come apart. More of tail section breaks off.
- Helicopter slides overboard on left side of ship, with pilots inside.
- Investigation assumes pilots are incapacitated by time helicopter hits water.

<http://www.cpf.navy.mil/foia/reading-room/2014/05/hsc-6.pdf>

## Employers Will Be Looking For Students With 'Drone' Skills

### Several Universities Have Already Established Programs

It won't be long before the ability to operate an [unmanned aerial vehicle](#) will become an in-demand skill for college graduates ... and several colleges and universities are not waiting for the FAA to make up its mind about how it is going to proceed. Analysts see [unstoppable growth](#) in business opportunities for UAVs, according to a report appearing in The Washington Post, ranging from delivery of packages, pizza and beer to journalism and real estate. A report last year from AUVSI predicts that UAVs could be directly or indirectly accountable for as many as 100,000 new jobs by 2025.



With the FAA-approved test sites coming online, some colleges and universities are already offering UAV degree programs in an effort to prepare students for those jobs. Such notables in the industry as ERAU, University of North Dakota, and Kansas State have degree programs directly tied to Unmanned Aerial Vehicle operation and management.

The Post says in its analysis that such jobs could reach into the six-figure range, and predicts that there could be a [significant "talent gap"](#) between the number of jobs and the number of qualified applicants in the not-too-distant future.

## Share Your Smarts: Breaking the Chain

There's an old saying: [Learn from the mistakes of others because you'll never live long enough to make all of them yourself](#). That's the idea behind *ROTOR* magazine's "Breaking the Chain" column — pilots and mechanics sharing their experiences of a time when they were headed for an accident but managed to [break the accident chain](#). Share your hard-won experience.



Submit a story today.

Don't worry; we'll keep your name out of it if you want us to. HAI Director of Safety J. Heffernan will scrub and sanitize your story, removing any personal or company references. "HAI is interested in your story of how you learned something about flying," said Heffernan. "Whether your story teaches safety, airmanship, technique, or even that you were lucky one day, [we would like to share it with our readers](#)."

"Help other *ROTOR* readers prevent the accident chain from ever starting. If you learned something good or bad from the experience, let me know."



Submit your stories at [j.heffernan@rotor.org](mailto:j.heffernan@rotor.org).

## **Report: FAA too reliant on Boeing for battery test**

The government failed to properly test the Boeing 787's lithium-ion batteries and [relied too much](#) on Boeing for technical expertise, a new report says.

The National Transportation Safety Board Thursday criticized the process used by the Federal Aviation Administration to certify the new jet in 2007. It also recommended that the FAA needed [to look outside the aviation industry](#) for technical advice.

The report directly conflicts with the FAA's own internal study released in March, which said the agency had "effective processes in place to identify and correct issues that emerged before and after certification." The 787 — also known as the Dreamliner — is the first commercial jet to rely on rechargeable lithium-ion batteries to power key systems. The batteries are lighter, letting airlines save fuel.



However, a January 2013 fire aboard a 787 parked at a gate in Boston broke out when one of a battery cell experienced an uncontrollable increase in temperature and pressure, known as a thermal runaway. Nobody was injured, but that fire — and a subsequent smoke condition on a separate plane nine days later — led to a worldwide grounding of the Dreamliner fleet.

Boeing subsequently redesigned the ventilation system around the batteries and the planes resumed flying. There are now 140 Dreamliners operating around the world. Another 891 have been ordered by airlines.

In its report Thursday, the safety board says the problems go back to September 2004, when Boeing first told aviation regulators of its plans to use lithium-ion batteries on the 787. The FAA was forced to create the [first-ever requirements](#) for use of lithium-ion batteries on commercial jets.

One of the nine requirements the FAA came up with was that the "design of the lithium-ion batteries must preclude the occurrence of self-sustaining, uncontrolled increases in temperature or pressure." In other words, no thermal runaways.

When Boeing and the FAA worked together to set up certification tests in March 2006, they considered the smoke a battery fire might cause but, according to the safety board's report, "Boeing [underestimated the more serious effects](#) of an internal short circuit." In January 2007, the FAA approved the testing plan proposed by Boeing. It did not include testing for such short circuits.

To avoid such oversights again, the NTSB suggests that the FAA needs to look outside the aviation industry for expertise when approving a new technology. For instance, the Department of Energy has done extensive testing on lithium-ion batteries. If the FAA had reached out to the Energy Department or other experts, the report says, the FAA could have recognized that its tests ["were insufficient to appropriately evaluate the risks"](#) of a battery short circuit.

The safety board recommends that the FAA reviews its lithium-ion battery testing process. Also, any certification of new technology should involve "independent and neutral experts outside of the FAA and an aircraft manufacturer."

The FAA has 90 days to respond.

## **3 simple ways to get more restful sleep**

Even people without insomnia can have trouble getting a good night's rest. Many things can interfere with restorative sleep — crazy work schedules, anxiety, trouble putting down the smartphone, even what you eat and drink.

The following three simple steps can help you sleep better.



### **Cut down on caffeine**

Caffeine drinkers may find it harder to fall asleep than people who don't drink caffeine. Once they drift off, their sleep is shorter and lighter. For some, a single cup of coffee in the morning means a sleepless night. That may be because caffeine blocks the effects of adenosine, a neurotransmitter thought to promote sleep. Caffeine can also interrupt sleep by increasing the need to urinate during the night.

People who suffer from insomnia should avoid caffeine as much as possible, since its effects can endure for many hours. Because caffeine withdrawal can cause headaches, irritability, and extreme fatigue, it may be easier to cut back gradually rather than to go cold turkey. Those who can't or don't want to give up caffeine should avoid it after 2 p.m., or noon if they are especially caffeine-sensitive.

### **Stop smoking or chewing tobacco**

Nicotine is a central nervous system stimulant that can cause insomnia. This potent drug makes it harder to fall asleep because it speeds your heart rate, raises blood pressure, and stimulates fast brainwave activity that indicates wakefulness. In people addicted to nicotine, a few hours without it is enough to induce withdrawal symptoms; the craving can even wake a smoker at night. People who kick the habit fall asleep more quickly and wake less often during the night. Sleep disturbance and daytime fatigue may occur during the initial withdrawal from nicotine, but even during this period, many former users report improvements in sleep. If you continue to use tobacco, avoid smoking or chewing it for at least one to two hours before bedtime.

Alcohol depresses the nervous system, so a nightcap may seem to help some people fall asleep. However, alcohol suppresses REM sleep, and the soporific effects disappear after a few hours. Drinkers have frequent awakenings and sometimes frightening dreams.

You can also improve the amount and quality of your sleep by getting regular physical activity and creating and sticking to a regular sleep schedule and routine.

## Air Washington Educates A&P Mechanics On Building Global Skills

Air Washington, a consortium of 11 of the Washington State's community and technical colleges, spearheaded a strategy in 2011 to educate Airframe & Powerplant (A&P) mechanic students, incumbent workers, and veterans on how they can develop a [global skill set](#) and increase their marketability, career options and pay.

[illegible]

These educational materials and an outline of the application process are available through the Center of Excellence for Aerospace and Advanced Manufacturing (COE), a partner of Air Washington. In 2011, Air Washington received a \$20 million Department of Labor grant to strengthen Washington State's aerospace industry through workforce training in advanced manufacturing/composites, electronics/avionics, aircraft assembly, and aircraft maintenance. The goal of the Air Washington project is to prepare 2,615 individuals by fall 2014 to enter Washington State's aerospace workforce and secure Washington as the world leader in aerospace training and education.

Air Washington identified a portion of this grant funding to create awareness of EASA certification for A&P mechanics [and others interested in the industry](#) through the development and distribution of these educational materials. The FAA is the national aviation authority of the United States. EASA is the European Union equivalent of the FAA. EASA promotes standards of safety and environmental protection in the aviation industry [for 27 member countries across Europe](#).

These educational materials outline what EASA is, the benefits of obtaining EASA licensing in addition to FAA certification and what pathway to pursue to become EASA licensed based on their current status:

Students currently enrolled in an Aviation Maintenance Technician (AMT) Training Program A&P certified mechanic and currently working in the aviation industry Veterans with prior military aviation experience.

FMI: [www.airwashington.org](http://www.airwashington.org), [www.coeaerospace.com/easa-certification](http://www.coeaerospace.com/easa-certification)

## **NHTSA Launches Consumer Tire Education Campaign**

The DOT's National Highway Traffic Safety Administration (NHTSA) has recently launched [TireWise](#), a tire safety and education campaign geared toward consumers and retailers. The campaign provides education on choosing and taking care of tires.

The TireWise campaign provides advice and information on tire buying (selecting the right type, size and rating), tire pressure and inflation, tread-wear (how to check tires for air and other visual defects), tire aging, the effects of high temperature on tires and replacing tires. The campaign will be featured on [SaferCar.gov](http://SaferCar.gov) and other outlets across the country.



In addition, the campaign features a “Life as a Tire” video that retailers can show consumers while they are shopping, as well as an informational “Congratulations on Your New Tire Purchase” form.



According to NHTSA, around [200 fatalities](#) occur each year from tire-related issues, with roughly 11,000 annual tire-related crashes as well. "Working with retailers and tire manufacturers allows us to reach the consumers at the time they are making these critical decisions, which is essential in building public awareness of tire-safety issues," said NHTSA Acting Administrator David Friedman, in NHTSA's press release. "Since the implementation of NHTSA's new tire standards, we've seen a significant decrease in tire-related fatalities, and we look forward to working with retailers, manufacturers, and other partners in the industry to continue improving traffic safety."

<http://www.nhtsa.gov/About+NHTSA/Press+Releases/2014/NHTSA+Launches+TireWise+Consumer+Education+Campaign>

## **Inspiration**

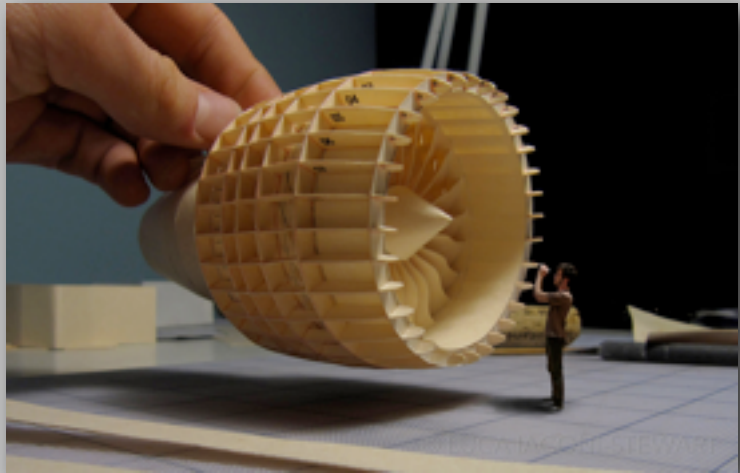
Incredible paper plane

Built entirely from manila folders!

By Luca Laconi-Stewart of San Francisco, CA.

Inspired by high school architecture class where he was assigned to create simple paper models using cut paper manilla folders, San Francisco-based designer Luca laconi-Stewart went home to begin construction on an extremely ambitious project: a 1:60 scale reproduction of a Boeing 777 using some of the techniques he learned in class.

That was in 2008, when laconi-Stewart was just a junior in high school. **Unbelievably**, the project continues five years later as he works on and off to perfect every aspect of the plane. Relying on detailed schematics of an Air India 777-300ER he found online, he recreates the digital drawings in Adobe Illustrator and then prints them directly onto the paper manilla folders. But everything has to be perfect. So perfect, that laconi-Stewart says he's actually built two airplanes, the one you see here and the numerous failed attempts including three tails, two entire sets of wings, and multiple experiments to ensure everything is just so.



The paper plane-making wonder-kid hopes to finally wrap up the project this summer and isn't quite sure what will happen next, but thinks an even larger 20-foot model could be an interesting next step. So far there are no plans for the completed model to go anywhere, but it would look great in an aeronautical museum or in the lobby of a certain aircraft manufacturer's lobby. Just some suggestions.

UNBELIEVABLE the kid is about 22 yrs. old now

[http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCsQFjAA&url=http%3A%2F%2Fwww.cnn.com%2F2014%2F02%2F03%2Ftravel%2Fmanila-airplane%2F&ei=WC-FU6aAC4nNsQSdi4D4Bw&usg=AFQjCNFLPhpYNS2Lc12FNywZWStRpHq1eQ&sig2=K0\\_Uee2qFgfYulC26IDfgw&bvm=bv.67720277,d.cWc&cad=rja](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCsQFjAA&url=http%3A%2F%2Fwww.cnn.com%2F2014%2F02%2F03%2Ftravel%2Fmanila-airplane%2F&ei=WC-FU6aAC4nNsQSdi4D4Bw&usg=AFQjCNFLPhpYNS2Lc12FNywZWStRpHq1eQ&sig2=K0_Uee2qFgfYulC26IDfgw&bvm=bv.67720277,d.cWc&cad=rja)