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Bad fuel-line coupling suspected after fire wrecks Air Atlanta 747-300

Icelandic investigators have discovered an **incorrectly-fitted fuel-line coupling** on an **Air Atlanta Icelandic Boeing 747-300** which was severely damaged by an engine fire shortly after landing at Dhaka in Bangladesh. The aircraft had been operating for **Saudi Arabian Airlines** and, on 25 March this year, had landed on Dhaka Zia International Airport's runway 14 following a flight from Medina.



While exiting the runway the crew received a fire indication for the inboard starboard Pratt & Whitney JT9D engine. Attempts to extinguish the fire were unsuccessful and the crew shut down the engines and ordered an evacuation.

Only minor injuries were sustained among the 309 passengers and 19 crew members but the Icelandic air accident investigation board **Rannsoknarnefnd Flugslýsa (RNF)** says the jet was "damaged beyond economic repair" by the blaze.



Inspection of the affected area revealed that a main fuel-line coupling, at the entry point to the front spar of the engine, was **missing a retaining ring and that an accompanying O-ring was not in the correct place on the fuel line.**

"It is considered that the O-ring was not working to seal as it should," says RNF, adding that inspectors saw fuel leaking from the coupling. Maintenance logs show that the coupling was opened, and the O-rings replaced, **during a C-check** on 27 August last year.

Malaysia Airlines' maintenance center is assisting the inquiry, states RNF: "Investigation is **focusing on maintenance issues and procedures for the replacement of O-rings on the aircraft fuel system.**" The aircraft involved, registered TF-ARS with serial number 22996, was a 25-year old example. Saudi Arabian Airlines is a strong Air Atlanta 747 customer. In June it agreed a long-term wet-lease agreement for a 747-300 and has also taken leases on two 747-200 freighters, bringing its Air Atlanta-operated 747 fleet to six aircraft.

Madrid crash investigation finds wing flaps failed

Spanair did not apply routine safety checks on warning systems before each flight

Routine safety checks recommended over 20 years ago which **could have prevented** the Barajas plane crash on 20th August were not applied by Spanair. The preliminary report into the crash by the Spanish Civil Aviation authorities (CIAIAC) indicates that the flaps on the wings which help support the plane on take off **were not in the correct position** and that the **warning system** which would have alerted the pilots to this error **did not work properly.**



A similar accident in another MD-82 plane occurred in Detroit in 1987 and as a result the manufacturer of this type of Aircraft now McDonnell-Douglas (now Boeing) **recommended that all airlines test their warnings systems before each flight.** However, it has been discovered that Spanair only carries out safety checks on this feature **before the first flight of the day** and when there is a change of pilot. **As expected the report has uncovered a chain of both human and technical errors.** The report which has been sent to all the parties involved, describes what happened in the moments prior to the crash and ends with the recommendation that it become obligatory to check warning systems before each flight.

The doomed aircraft arrived in Madrid from Barcelona on the day of the crash at 10.13 hours on 20th August without any reported incidents. It refueled in Barajas where it was scheduled to fly to Las Palmas and was given the all clear to go to the runway. According to information gained from one of the black boxes the flaps were opened to 11 degrees. Take off was authorized at 13.25 hours. However, when the plane got to the runway the pilots communicated a small problem a minute and a half later and asked for permission to leave the runway.

The plane then left the runway and technicians tested the fault which had been detected which was related to overheating (105 degrees) in one of the temperature gauges. The technicians then proceeded to open the electrical circuit which connected the heating to the RAT temperature gauge where the problem had occurred. When tested again the gauge then showed a normal temperature setting so the aircraft was once again given the all clear to return to the runway.

However at this point the flaps were at 0 degrees. The report does not clarify whether this was due to a technical fault or human error.

However, whatever the cause of this error it appears that the alarm system designed to alert the pilot if this happens did not work. According to the report no alarm sound which would have indicated that the flaps were completely shut was recorded by the black box.

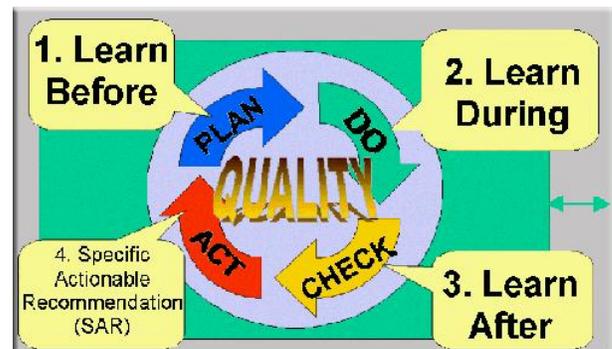
It is not known why this alarm system did not work but it does examine the relation of this alarm system to the RAT temperature gauge which had been faulty earlier.

The report points out that according to the manufacturer alarm systems should be checked at the beginning of the day and in stopovers without exception. However Spanair only asks its pilots to check this once a day or when both pilots change. Therefore if these instructions were followed the crew of flight JK5022 would have carried out this safety check in Barcelona and would not have repeated it in Madrid.

Lessons learned, says owner

One-Two-Go Airlines and its parent airline, Orient Thai, hope to soon win their licenses back after improving safety standards following the crash of flight OG269 which killed 89 people one year ago.

Udom Tantiprasongchai, the president of both airlines, admitted he had learned lessons from the tragedy. Including that a public transport operator had to make passenger safety a priority.



The Civil Aviation Department's investigation found "human error" was the main cause of the tragedy. The pilots failed to follow normal safety procedures while trying to land in bad weather, department chief Chaisak Angsuwan indicated.

The department also found safety flaws with One-Two-Go and Orient Thai airlines. The test results from their MD-80 series pilots that the airlines handed to the department were fakes.

The department terminated the licenses of seven foreign pilots and two Thai pilots after finding the reports were fakes and took legal action.

It was also found there was no quality assurance system to control flight operations, flight schedules and aircraft maintenance at the airlines. One-Two-Go did not record the flying hours of its pilots, and many had worked overtime.

The department suspended the licenses of both airlines on July 21. The suspension was extended to Sept 20 after the airlines failed to meet safety standards within the first 30-day deadline, Aug 21.

"We took the suspension as an opportunity to bring our pilots up to standard," Mr. Udom told the Bangkok Post yesterday.

He said the airlines had now complied with the department's safety standards and he hoped the department would allow both airlines to resume services after the Sept 20 deadline.

Both airlines would restart with chartered flights and then resume their regular flights if allowed, he said.

[EASA orders casing fit on A330/A340s to contain APU failure](#)

European safety regulators are ordering carriers to [fit secondary casings](#) to [Airbus A330](#) and [A340](#) auxiliary power units to prevent possible damage from **uncontained failure**.



Investigators are still trying to understand the mechanism for the failures - experienced by at least two A330 operators on the ground - but the [European Aviation Safety Agency](#) states that **collapse of the APU's drive-end bearing** appears to be a preceding event.

EASA has already issued emergency directives requiring inspection of APU sections for evidence of debris, a possible **precursor** to drive-end bearing problems. It says the previous failures have led to structural damage to the APU compartment and even the stabilizer compartment. The same APU design is used on both A330s and A340s.

In an updated emergency directive EASA is requiring operators to [fit a secondary housing](#) on the APU generator. Airbus has developed such a housing designed to contain generator parts should the APU fail. "Loose APU generator parts can lead to damage to the APU firewall, reducing its fire-extinguishing capability and potentially leading to a temporary uncontrolled fire," says the directive. EASA says the secondary housing should be fitted no later than 31 March next year.

Engine failure ruled out in Russian airline crash

Investigators on Thursday **ruled out engine failure** as causing the weekend plane crash in Russia that killed all 88 people on board.

The Interstate Aviation Committee said both engines on the Boeing 737-500 were working when it crashed Sunday while preparing to land in the Ural Mountains city of Perm. The plane belonged to the Russian carrier Aeroflot-Nord.



Russian transport officials initially blamed the crash on a faulty engine that caught fire, but the investigating committee said **it found no sign of engine fire**.

"There is no indication of an engine fire or the aircraft breaking up in the air," said the committee, which investigates air crashes in Russia and other ex-Soviet nations.

"Both engines were working until the plane hit the ground," it said.

Investigators have yet to determine what caused the crash — Russia's worst air disaster in two years.

Flight controller Irek Bikbov said in remarks broadcast by state-run Channel One television over the weekend that the jet's pilot was **behaving strangely, disobeying orders** to descend on the final approach and instead taking the jet to a higher altitude. Bikbov said he then ordered the pilot to make a second run, but instead of making the right turn he turned left. When the controller asked the pilot if things were normal on board, the pilot answered positively.

DOT Report Says FAA Should Avoid 'Nasty Shocks'

The FAA's **approach** to Airworthiness Directive (AD) compliance was a significant feature in the Department of Transportation's Independent Review Team report on "Managing Risks in Civil Aviation. The team was formed after the FAA suffered what the report called a **"perfect storm"** earlier this year during AD compliance issues with Southwest Airlines and American Airlines.



In Southwest's case, the report noted, non-compliance issues resulted in the FAA being "broadly accused and roundly condemned for having slipped into excessively cozy relationships with industry. Shortly thereafter, an American Airlines AD compliance problem caused the agency to be "accused of acting in an unusually harsh and legalistic manner, to the significant detriment of the traveling public.

The team noted that although ADs are regulations, "Law is almost never perfect, and can always be improved. Imperfections in law, and simple differences of interpretation, produce the possibility of **nasty shocks** for a regulated industry.

As a general rule, regulators ought **not to be in the business** of delivering nasty shocks. Clarity of the rules, advance warnings, sufficient discussion, open communication channels and rapid resolution of disagreements, all go a long way toward eliminating the chance of such unpleasant and disruptive shocks."

Aviation Authorities Turn a Blind Eye to Lapses in Safety Standards

Aircraft maintenance experts will gather in Malmö, Sweden from September 18-21 for the 36th Aircraft Engineers International Annual Congress to discuss safety standards.

According to Fred Bruggeman, AEI General Secretary, "Airline passengers are unwittingly facing higher levels of risks due to the increasing amount of aircraft system faults being reported when **commercially convenient** for the operator to repair, rather than when they actually occur."



"The situation is a cause of great concern because pilots are **not immune to commercial pressures**. With constant cost cutting by the airlines, many pilots feel the need to report defects only on **homebound flights** or flights into airports **where engineers are available**. As result, safety may be compromised to an unacceptable level".

Airlines and national regulators were extremely quick to deny the results of an AEI survey into the situation, which highlighted that up to **85% of defects** are reported on homebound flights or into a maintenance base.

AEI has challenged the industry to attempt to prove them wrong by conducting their own survey but to date not one single airline or authority has responded positively.

"**Aircraft engineers around the world** are confronted with this troubling neglect of safety regulations on a daily basis and as a result, passengers are being exposed to greater risk" said Mr Bruggeman.

A leading pilots union has recently stated that **“Pilots are under pressure”** and when pressed on whether the log book claims affect safety the union stated “We have not reached that point yet, but who knows whether it will be a different story in a year’s time.”

AEI has once again called for closer co-operation with pilots on this issue which can no longer be ignored. Perhaps of even greater concern was the way in which various European regulating authorities responded to the survey’s findings.

All authorities were very reluctant to take action, some even claimed “that they have complete faith in their own system of auditing”, whilst others simply did not respond.

The situation also highlights loopholes raised by AEI in the current auditing system, which **rarely involves unannounced inspections** where the action actually takes place, outside on the ramp where the errors occur.

Instead the auditing system usually involves inspectors checking procedures etc. **in the hanger offices.**

Furthermore, occurrence reports written by engineers highlighting these safety issues are often just filed away and eventually lost in the system but **seldom lead to any corrective action.**

AEI has witnessed very little activity from the European National Authorities to recognize and correct these serious safety lapses despite numerous reports and the readily available data regarding these failures.

Too many National Authorities appear as if they wouldn’t mind sweeping these issues under the rug in order to ensure their cozy “relationship” with the airlines is not disturbed, often citing lack of resources as an excuse for non-action.

AEI are however 100% committed to ensuring that passengers are protected at all times by insisting that **safety standards are maintained** at the highest possible levels. Therefore AEI will continue to offer its full support to EASA in achieving its own mission of “promoting the highest common standards of safety”.

The 36th **Aircraft Engineers International** Annual Congress is extending an open invitation to the Regulators throughout Europe to come and discuss the issues and potential solutions.

SAFETY BOARD RECOMMENDS IMPROVED AIRCRAFT MAINTENANCE AND PILOT TRAINING FOR PARACHUTE JUMP OPERATIONS

The National Transportation Safety Board released a special investigation report identifying several **recurring safety issues** with parachute jump operations, and recommending improvements in **aircraft maintenance** and pilot training.



Parachute jump operations represent a segment of U.S. general aviation that transports about 3 million parachutists annually. Although the risks associated with parachuting are generally perceived to involve the acts of jumping from the aircraft, deploying the parachute, and landing, since 1980, **32 fatal accidents claimed the lives of 172 people** in airplane accidents unassociated with these parachutist-controlled risks.

"As this activity increases in popularity, we have to ensure that safe operations are adhered to by all operators," said Acting Chairman Mark V. Rosenker. "Our recommendations in the areas of **maintenance and training** will move this industry forward in preventing these types of accidents."

The Special Investigation Report was prompted by the investigation of a July 29, 2006, de Havilland DHC-6-100 crash in Sullivan, Missouri. The aircraft, operated by Skydive Quantum Leap as a parachute operations flight, crashed after takeoff from Sullivan Regional Airport. The pilot and five parachutists were killed and two other parachutists were seriously injured. The Board determined today that the probable cause of the crash was the pilot's failure to maintain airspeed following loss of power in the right engine.

The Board's study of parachute jump operations issued recommendations to the Federal Aviation Administration (FAA) and the United States Parachute Association (USPA) to address a pattern of safety deficiencies in several areas:

- * **Inadequate aircraft maintenance and inspections**
- * Lack of pilot initial and recurrent training programs, and examination standards that address operation- specific and aircraft-specific considerations
- * Inadequate FAA oversight and direct surveillance.

The Board concluded in the Sullivan investigation that more parachutists may have survived, and injuries may have been reduced, if more effective restraints had been used. "This clearly emphasizes the importance of implementing our recommendations designed to increase survivability when an accident does occur," said Rosenker.

As a result of the Sullivan investigation, the Safety Board made recommendations to the FAA and USPA regarding dual- point restraint systems for parachutists that reflect the various aircraft and seating configurations used in parachute operations.

A synopsis of the Board's reports, including the probable cause and recommendations, is available on the NTSB's website, www.nts.gov, under "Board Meetings." The Board's full report will be available on the website in several weeks.

[Much-lauded American Airlines safety program likely ends next month](#)

A much-lauded [safety program](#) for American Airlines pilots will likely end next month, airline officials said, after a breakdown in negotiations to renew the program.

[The Aviation Safety Action Partnership](#), which began in 1994, allows pilots to report safety-related incidents for investigation without fear of discipline from American or the Federal Aviation Administration. Aviation experts have praised it as [an effective way](#) to identify potentially dangerous safety lapses that otherwise might go unreported.



The current program was scheduled to expire in January. The FAA extended it as American negotiated a renewal with the Allied Pilots Association.

But those talks haven't produced a new program, despite several extensions. Pilots have argued that in some cases, the company unfairly disciplined pilots even when an incident was accepted for review under the program.

Airline executives countered that the program has worked well. Airline officials proposed creating teams to review every event and [offered to eliminate discipline for lapses that did not involve reckless behavior](#) by the pilot.

On Friday, the company informed pilots that the FAA would grant no more extensions.

"Proposed changes to address [union] concerns have not been accepted," airline officials said in the memo to pilots Friday. "Absent an agreement, as of Oct. 13, you will no longer have the protections afforded by the ASAP program."

American officials said they would establish a confidential hot line for pilots in lieu of the program.

The program's demise would come after months of intense scrutiny of safety on the nation's airlines. American grounded 300 MD-80 jets for emergency inspections in April after the FAA raised concerns. Southwest Airlines, meanwhile, was fined a record \$10.2 million for allegedly flying Boeing 737 planes without inspections for potentially deadly fuselage cracks.

Line Technician Killed by Turning Prop

The single-engine turboprop, with eight people aboard, was landed at about 0220 local time at Wiley Post Airport in Oklahoma City on Jan. 3 2008. "Upon reaching the FBO's (fixed base operator's) dimly lit ramp, a line technician ...used lighted wands to marshal the airplane to a parking spot," the NTSB report said.



The pilot set the parking brake and was shutting down the engine when he heard a loud "thud" and felt the airplane vibrating. "He looked up and saw the line technician rolling on the ramp toward the airplane's left wing tip.

One of the passengers, a physician, administered first aid until emergency response personnel arrived. However, the line technician's injuries were fatal.

The technician had completed professional line service training in September 2007. "This training included the dangers associated when working around propellers," the report said. In October, the technician received a written warning from the FBO for nonadherence to company procedures after he chocked the nosewheel of a King Air while the engines were still running.

Leaking Fuel Pump Fitting Causes Explosion

Beech B55 Baron. Substantial Damage. No Injuries.

The pilot was starting the Baron's right engine in preparation for a positioning flight from Atlanta's Fulton County Airport the night of March 19, 2007, when he heard a 'thump' and saw fire emerge from the engine cowling. The fire went out when he shut down the engine.



The NTSB report said that the right wing, from the nacelle to the wing tip, had been damaged by an explosion. Investigators found that a **B Nut fitting on the fuel pump was leaking**. "Examination of maintenance records revealed that the right main fuel cell was replaced approximately three months and 12 flight hours prior to the accident," the report said.

NTSB said that the probable cause of the accident was **"improper maintenance of the B-nut fitting adjacent to the fuel pump."**

US Airways earns FAA award

The Federal Aviation Administration has awarded US Airways Group Inc. its **Diamond Award for excellence in maintenance training**.

This is the **10th consecutive year** US Airways has received the award. The honor is given only when all eligible employees participate in the FAA's aviation maintenance technician program. The program, which began in 1991, comprises initial and recurrent training in FAA regulations and policy as well as aviation-industry maintenance instruction.



No More Blame & Shame – Part I

Developing event-reporting systems may go a long way to reducing patient care errors in EMS

As part of a routine skin biopsy procedure at his dermatologist's office, a healthy 22-year-old male receives an injection of lidocaine with epinephrine. Within minutes, his heart starts pounding and he begins to feel anxious. The dermatologist believes the patient is having an anaphylactic reaction and calls 9-1-1.



When EMS arrives at the scene, the dermatologist informs them that the patient is suffering from an anaphylactic reaction. The patient reports that his heart is pounding, and he feels short of breath and very anxious. En route to the hospital, the paramedic asks his EMT partner to get the diphenhydramine and epinephrine vials out of the drug box. The paramedic later recalls asking the BLS partner to draw up **"all of the diphenhydramine,"** but the EMT recalls hearing the paramedic ask for **"all of the epinephrine."** The paramedic takes the prepared syringe from the EMT and administers the medication intravenously, **without checking** the amount or the vial it was drawn from. Within minutes, the patient's rhythm changes to sustained ventricular tachycardia, and the patient complains of severe chest pain and diaphoresis, becomes distraught and says, "I think I'm dying."

At this point, the paramedic realizes that he has just delivered 1 mg of 1:1,000 epinephrine via rapid intravenous bolus. Later, in the emergency department, it is determined that the patient suffered a myocardial infarction during the event. A lab analysis shows a rise in troponin levels, and a wall motion abnormality is found on echocardiogram, indicating that the **patient sustained permanent damage to his heart muscle.**

Adverse events like this are not uncommon. In fact, **more deaths occur each year due to medical errors than from motor vehicle crashes, breast cancer or AIDS.** Although there are currently no reports that specifically look at EMS error rates, several suggest that EMS is no different than the rest of medicine with regard to patient safety. This is especially significant considering that 15,000 EMS systems and upwards of 800,000 EMS personnel respond to more than 16 million transport calls annually.

The current EMS **culture often uses "blame-and-shame" mentality.** When an adverse event occurs, the common first response is to find out whose fault it is and discipline the individual. Unfortunately, this approach is **not effective** for improving overall patient safety, for several reasons. First, it ignores the fact that **other factors** in the system (besides the individual provider) might have contributed to, facilitated or even caused the adverse event to occur. This is important, because **if these factors can be identified and modified,** the chance of similar events occurring in the future can be reduced. Second, **focusing blame** on the individual doesn't prevent the same event from happening to another provider. Third, the **blame-and-shame mentality creates a culture** where EMS providers fear reprisal and may try to hide adverse events and near-misses rather than using them to improve the system. Unless management and system leaders are aware of events, they can't take steps toward reducing them.

Other high-risk industries, such as aviation and nuclear power, have become highly reliable and safe because they have moved away from this mentality and instead use concepts like the **systems approach to maximize their safety.** The systems approach recognizes that all adverse events have **multiple contributing factors,** many of which are out of the provider's control. Aviation, for example, utilizes an Aviation Safety Reporting System (ASRS), which documents both adverse events and near-misses. Observing ASRS's success in aviation, members of the EMS community followed suit and developed a similar system: the Medical Error Prevention and Reporting System (MEPARS). A number of agencies around the country have implemented MEPARS or similar systems. Since its inception, MEPARS has not only **identified several near-misses and adverse events,** but has reduced the recurrence of similar events. The purpose of this article is to illustrate how using a systems approach in EMS, and using an event-reporting system like MEPARS, **is a better method for reducing adverse events than the blame-and-shame approach.**

Maintenance Red Tape

The Civil Aviation Safety Authority of Australia (CASA) says it has **streamlined procedures** used in licensing qualified aircraft maintenance personnel with experience outside Australia or in the military. CASA's actions are aimed at increasing numbers of licensed aircraft maintenance engineers in Australia.



Under the new procedures, **licensed maintenance personnel** from six nations –Canada, France, Germany, Italy, the Netherlands and the United Kingdom – will no longer be required to undergo additional technical examinations before being permitted to work in Australia.

“The aviation industry always needs engineers and by cutting red tape, we can open up new opportunities for new people with the right qualifications to fill critical vacancies,” said CASA CEO Bruce Byron.

Korean Air Carriers Safest in the World, Audit Finds

Korea has received **top marks for aviation safety** seven years after it was branded a loser in the category.

The Ministry of Land, Transport and Maritime Affairs on Tuesday said in the Universal Safety Oversight Audit Program conducted by the International Civil Aviation Organization (ICAO), a UN agency, for 190 member states, **Korea tops the list of 108 countries that have so far undergone the audit.**



Korea got a safety standard compliance rating of **98.82 percent**.

In the first evaluation conducted by ICAO in 2000, Korea ranked 53rd with a safety standard compliance rating of 79.79 percent among 162 members. When the U.S. Federal Aviation Administration gave Korea a category 2 rating in 2001, Korea was restricted in code sharing with foreign carriers and banned from increasing flight routes to the U.S., while U.S. soldiers and government officials were prohibited from using Korean air carriers. Korea was given a category 1 rating after a reassessment four months later.

ICAO assesses 190 member countries from 2005 to 2010 on **9,608 safety standards** in eight areas. Korea has achieved a compliance rating of **96.35 to 100 percent** in each area.

"Until recently, the world's top safety compliance rating was at the 96 percent range and the world's average was 57.77 percent," said Hong Soon-man, the head of Civil Aviation Safety Authority.

"In view of this, even after the ICAO's assessment of all member states is done by 2010, our international safety standard compliance record **will not easily be broken.**"

According to the interim results, Armenia ranked second with 96.32 percent and Canada third with 95.38 percent.

EAA Says Over \$42K Available For AeroScholars

Enrollment Open For The Fall Semester

The Experimental Aircraft Association is giving parents the chance to make **math and science exciting** for their children, through EAA's online aviation courses... which can also give students a head start on their college credits!



Through the generous support of EAA donors, over \$42,000 in AeroScholars scholarships will be available this year to high school students, ages 14-18. AeroScholars is a series of two online aviation science courses, Fundamentals of Aviation and Advanced Aviation, that can earn a student up to 6 college credits (recognized nationally), and prepare them to take the FAA Private Pilot written examination. The courses will also explore aviation careers. Each scholarship includes the course materials, live help and technical support, college credit upon successful completion, and one year EAA student membership.

Both fall and spring semester scholarships are available. But hurry -- fall semester applications must be received by September 26, 2008. Spring semester applications must be received by January 8, 2009.

www.aeroscholars.org/sitemap.htm



Lone Star Museum Heavily Damaged By Ike

While Hurricane Ike has faded from memory for most of the country, those hit by the storm will think of little else in coming weeks as the cleanup goes on. In the aviation world, nowhere did the **storm wreak more havoc than at the Lone Star Flight Museum, in Galveston.**



The museum took a direct hit but the scope of the damage wasn't clear until we received these photos from a reader there. As much as eight feet of water filled some of the facilities and priceless aircraft were inundated. According to a report from the museum, the inventory in the gift shop was destroyed, as were many exhibits. The major need now is fresh water to flush out the aircraft that were hit by the storm surge. Of course, the buildings took a major pounding too and extensive repairs will be required. Some aircraft were moved in advance of the storm and are fine.

http://www.avweb.com/avwebflash/news/LoneStarMuseumHeavilyDamagedByIke_198810-1.html



Beating the Mircosleep Odds

Two pilots have flown the globe in a helicopter in 11 days, 7 hours and 2 minutes—an unofficial new world record. Starting from LaGuardia Airport in New York, Scott Kasproicz and Steve Sheik flew a total of 20,888 miles over 20 countries; averaging 85 mph and sleeping only two hours a night, they easily best the old record of 17 days, 6 hours, and 14 minutes despite stopping more than 80 times to refuel. “We just approached our schedule very aggressively,” said Kasproicz, 55, a former state transportation official in Virginia. “We didn’t let anything stop us or slow us down.”



Game Over

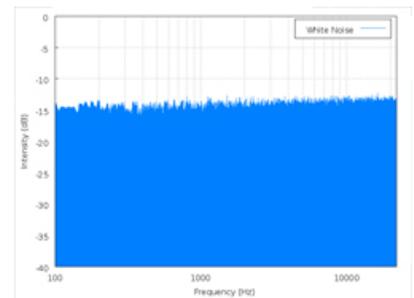
Dave Freeman, co-author of the best selling book 100 Things to Do Before You Die, died this week at the age of 47 after falling at home and hitting his head. Freeman had visited about half the places in the book, his co-author Neil Teplica said, “He didn’t have enough days,” Teplica said, “but he lived them like he should have.”



Midnight Shift Nugget

Create Your Own White Noise Generator

Chris Radcliff over at *Wired's* GeekDad blog has some interesting tips for parents on how to create your own white noise generator. "White noise" — such as caused by a fan, air conditioner or radio static — can often block out unwanted noise and encourage sleep.



The hack described in GeekDad involves recording the sound of running water, editing the sample using sound editing software so that it repeats, then burning the sample to CD and playing on repeat for as long as needed. Or you could skip the step of burning the sample to CD and add it to a playlist for your portable media player instead. **Another solution** would be to head over to <http://www.simplynoise.com/> where you could listen to their nose generator all day or simples for your own use.



Sleep apnea – Part III

Alternative Treatments

However, there is another possibility. Keith Thornton, DDS, of Airway Management in Dallas, invented the TAP (Thornton Adjustable Positioner) as an alternative to CPAP.



“Your windpipe is flexible so you can swallow and the airway opens and closes.

During the day your brain keeps your airway open, but when you go to sleep your **muscles relax and in some people certain conditions can cause the airway to collapse,**” Thornton said.

“One way to correct the problem is through surgery by removing tissue from the back of the throat, but it doesn’t have a very good success rate and it’s painful.”

Thornton said for years there were two choices: surgery or CPAP. “Unfortunately, the patient compliance rate with CPAP is extremely poor, according to about a dozen studies,” he said. “When used properly it works fine, but different studies have indicated **compliance rates as low as 43 percent.** It’s cumbersome, and as a result patients either stop using it or they wear it for only a few hours then take it off.”

Thornton emphasized that **sleep apnea is a lifetime disorder** and the treatment must be conducive to the individual’s lifestyle. “CPAP must be taken out at the airport [for security inspection of carry-on baggage] like a computer. How embarrassing is that? Women don’t like the straps in their hair and many people just can’t sleep on their back. **Fortunately there’s now a third choice: TAP.**”

TAP pulls the lower jaw forward essentially the same way a paramedic does before administering CPR. It works because the tongue and surrounding anatomy are connected to the jaw. Pulling the jaw forward causes the tongue to come forward with it and out of the way of the airway.

The TAP, also known as an “oral” or “dental appliance,” consists of two custom-made trays that fit over the teeth and connect in front with a clasp that can be adjustable to change the positional relationship between the upper and lower teeth. The farther forward the lower jaw moves, the more the airway opens. **The idea is to set it far enough forward to reduce, if not entirely eliminate, the apnea.**

Thornton said he sells TAP devices to all three military branches and the VA hospital system. “Air Force pilots diagnosed with sleep apnea are taken off the flight line unless they’re able to wear a TAP. Then they’re issued two TAPs and returned to flying status. They’re small, they don’t require electricity and there’s a higher incidence of compliance over CPAP,” he said.



He cautioned against buying pre-made dental appliances on the Internet. “It’s a problem for several reasons. First, you don’t get a baseline initial evaluation necessary to determine if the treatment is working. Second, most are not custom fitted and won’t do the job. Those that do offer custom fit send you the materials to do the impression but you have no training. Finally, there’s no follow-up study to see if it’s working.”

Richard Craig, DDS, of the Midwest Dental Sleep Center of Shorewood, Ill., underscored the problem with CPAP. “**If you don’t use it, it doesn’t do you any good and many people simply don’t like using it.** Using oral appliance therapy has a significantly higher percentage of adherence. It means no more hoses, straps or headgear, sleeping in any position you wish, low maintenance and easy to travel with.”

Craig explained that in some severe cases a patient might use both an oral appliance and CPAP. “The point of treatment is to restore you to a normal condition or get as close to it as possible. There are occasions when we’ll recommend using both, but the advantage of using the oral appliance with CPAP is you can cut the air pressure in half, making it a more comfortable experience.”

According to Craig, the other advantage of using an oral appliance is that you can do follow-up testing in your own home. “We now have devices you can take home that will give us the information we need to determine if the appliance is doing the job. I want to test you in your own home the way you normally live. If you have a glass of wine before bed I want that to be part of your test.”

“It is very simple to use. You put a strap on your forehead, a small tube comes around to your nose like a cannula and you can sleep in any position you wish. When you’re done you bring it to us, we plug it into the computer and it downloads the data,” he said.

Sleep apnea treatment is not inexpensive. You may need several sleep clinic studies to be sure the device works properly and compare your results to your baseline to see if you're improving.

A CPAP machine and mask can run from a few hundred dollars to more than \$1,000. An oral appliance program, including original consultation, a custom fitted device, adjustments and follow-up studies can be \$2,500 to \$3,000. It is also an ongoing process, with patients undergoing an annual evaluation to be sure the device is still effective.



If you are diagnosed with apnea **you're only halfway down the road to a cure** and about to face potentially the most trying aspect of the disease—insurance coverage. Craig said that while a growing number of insurance companies recognize sleep apnea testing and treatment, unfortunately many medical plans are still in the process of determining their amount of coverage. Still more call it experimental and refuse to cover it.

Fact Check

Excessive speed was a factor in 31 percent of all traffic fatalities in 2006.

Source: National Safety Council, "Injury Facts," 2008



Think Safety

See Your Way To Driving Safety

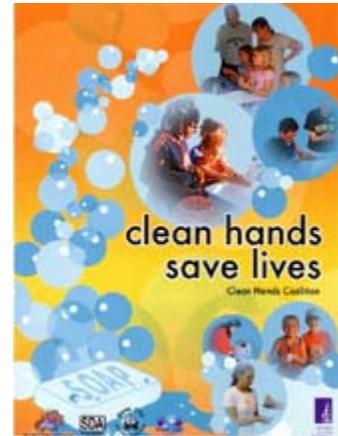
- > Completely clean your windows of winter's frost, ice and snow before driving.
- > Keep your vehicle in good mechanical condition and ensure that your tires remain properly inflated.
- > Be aware that bridges and overpasses freeze before road surfaces do.
- > Avoid driving in bad weather if possible. If not, exercise extra care, especially when stopping and turning.



HEALTH AND SAFETY OBSERVANCES

Clean Hands Week, September 21 to 27, 2008

According to the Centers for Disease Control and Prevention, proper handwashing is the single most important thing people can do to prevent illness and the spread of germs. Share these proper hygiene tips with your workers:



When to wash:

- Always wash up before eating.
- Wash your hands before preparing food to prevent food poisoning and the spread of disease. Wash before you handle each different food. For example, wash between cutting the raw chicken and dicing the vegetables.
- Always wash your hands after using the toilet. If you have been handling chemicals, wash before using the toilet, too.
- Wash your hands before handling contact lenses or applying makeup.

How to wash:

- Take off watches, bracelets and rings.
- Wet your hands and forearms using a stream of warm running water.
- Lather thoroughly with the recommended cleanser such as soap. Plain soap and warm water is good enough for most hand washing, providing it is done properly.
- Rub your hands together vigorously for at least 15 seconds. Scrub your wrists, the front and back of your hands and your fingers. Clean under your fingernails.
- Rinse well under warm running water.
- Repeat the washing and rinsing steps if necessary.
- Dry your hands completely on a one-use towel or under an air drier.
- Use a paper towel to turn off the faucet and open the door without contaminating your hands again.

Picture This!



Yes, we know it is so tempting. Pianos are heavy and so darn awkward, and given the looks of this semi-demolished house, the stairways may be questionable. But honestly, is this the best you can do—a half-Nelson and poor footing on a moving piece of machinery? Why not just tie the darn thing on and let it take its own chances?

On the plus side, [nice hat!](#)