Aviation Human Factors Industry News

April 23, 2008

Vol. IV. Issue 15

Why French Prosecutors Can Charge Continental Employees for Air France Crash

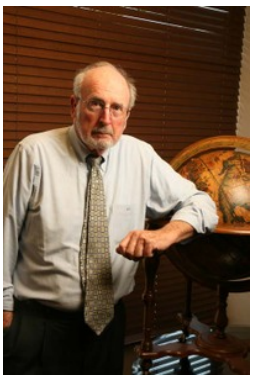
Many people are surprised that French prosecutors want to file manslaughter charges against four people, including two Continental Airlines employees, they blame for an Air France Concorde crash that killed 113 people. They shouldn't be. After all, we're talking about the French.

We turned to Gerald C. Sterns, a renowned aviation attorney with Sterns & Walker to explain the decision, which seems excessive given it was an Air France jet that crashed. Sterns knows a thing or two about aviation law, having recently won a case before the U.S. Supreme Court and litigated high-profile cases around the world.

Flight 4590 crashed July 25, 2000, shortly after leaving Charles de Gaulle International Airport in Paris. Investigators attributed the crash to a strip of titanium that fell from a Continental DC-10 that used the same runway just before the Concorde. The metal punctured one of the Concorde's tires and the debris punctured one of the jet's fuel tanks.

Prosecutors want a judge to file the charges against Continental mechanic John Taylor and maintenance Chief Stanley Ford. Claude Frantzen, former head of training at the French civil aviation authority, and Henri Perrier, ex-chief of the Concorde program, also could face charges.

Wired: Manslaughter? Wasn't this an "act of God"? Why criminal, rather than civil, charges?



Gerald Sterns: In France, every air accident is a criminal matter by law, unlike the U.S. A criminal judge is appointed to oversee the investigation. France is unique in that the statutes of limitation for bringing criminal actions are very, very long. Also, so long as the case is open, the appointed judge gets lots of perks. This, in part, explains why criminal charges are just now being filed. "Act of God" is not a legal term but a media one. There is no such defense -- either someone is at fault for an accident or they are not, depending on proof. In the case of the Concorde, however, there was lots of blame to go around, both in the design of the fuel system, the maintenance on the Continental plane in Houston and perhaps the airport.

Wired: Prosecutors claim that the panel that fell from the Continental DC-10 and purportedly punctured the Concorde's tires was made of titanium, a metal harder than the aluminum panel it replaced. Yet airplane tires blow out all the time. Isn't the deficiency here with the Concorde's fuel tank design?

Sterns: Yes, indeed, no question. It is foreseeable that crap will get onto a runway or that tires may explode for other reasons.

Wired: As long as both aircraft passed government mandated safety inspections, how can there be criminal liability?

Sterns: It depends on the law. In the U.S. you still can bring a civil damage claim for a defect on an aircraft, if you can prove it. [That the aircraft] has been certified by the FAA or inspected, etc., is a matter of proof the defense would use. But it's not conclusive. France, again, is different. For the same reasons [I've cited], criminal charges can be brought if the authorities think they can nail someone.

Wired: The French prosecutors recommended trying the two Continental employees who installed the defective panel. If the titanium strip was kosher with Boeing's maintenance mandates for the DC-10, shouldn't Boeing be charged instead?

Sterns: The French system only tries individuals in criminal matters. Boeing might have been negligent with the manual, but that goes to civil liability.

Wired: Prosecutors also recommended manslaughter charges against a Concorde engineer who allegedly knew as long ago as 1979 that the fuel tank design was flawed. Why not file charges against the government employees who certified the aircraft for flight?

Sterns: Government regulatory agencies are generally immune from any civil or criminal liability in carrying out official duties that involve policy decisions or discretionary functions. That is certainly the rule in the U.S. and probably also in France.

Wired: Few analysts believe that anyone will go to prison over this. Is there something about French or European Union law that requires prosecutors to seek criminal charges in order to get compensation for the victims?

Sterns: No. The compensation side of this, I think, was resolved some years ago, although it is not uncommon for prosecutors to use criminal charges as leverage to get money for victims who intervene in the criminal proceedings. I think in this case, however, all the passenger claims were settled with the insurers for the major players. But don't bet on somebody not going to prison. That is mainly what this criminal prosecution is all about. Along with the judge, the prosecutor has a high profile. But the U.S.-named defendants are not going to be players. We will never permit them to be extradited to France under these facts and after this much time.

Wired: Why isn't the airport liable for runway maintenance?

Sterns: [It] might be if there were a maintenance issue, such as a huge pothole that had been there for some time. A dropped metal panel is something quite different, however. It depends on how long, how obvious or not, etc.

Wired: If you were defending Continental Airlines, what line of reasoning would you use?

Sterns: Metal debris can get on a runway in any number of ways. Airplane tires can explode for many reasons. The fuel system of the Concorde should have been designed to anticipate such ... The cause of the crash was crappy design on the Concorde.

Wired: And if you were defending the Concorde?

Sterns: The reverse. No one can foresee that some dummy will rig a sharp titanium shard on an engine in such a sloppy manner that it can just fall off in normal service. The Concorde could never have anticipated such negligence.

Wired: It will be up to a judge about whether to proceed with this case. Care to take a guess on how it will go?

Sterns: No. All bets are off when dealing with the French. Too many other things than just the facts are at play here. Very suspect, however, is how very long they took to start these proceedings -- very prejudicial to the defendants. My take on this is that there is an Eliot Spitzer revelation or a Rudi Giuliani-type prosecutor who is trying to make a name for himself with a high-profile case. And a judge who likes to keep the perks of the investigation going for much longer. The criminal case could drag out for another five years. Stay tuned.

jetBlue AIRWAYS

Inquiry looks at FAA's actions after El Paso mechanic was killed fixing Continental plane

Exclusive: Immunity for Continental pilots after mechanic died at issue

A congressional committee is investigating regulators' decision to grant immunity to Continental Airlines pilots for mistakes that led to an El Paso mechanic being sucked into a jet engine in 2006.

The mechanic inspecting the plane, Donald Gene Buchanan, 64, was killed. The Federal Aviation Administration's team that granted amnesty to the pilots was composed of people with ties to Continental Airlines.

The FAA granted amnesty over the objections of a veteran safety inspector, Phil Thrash, who reported his concerns to the FAA's administrator and the U.S. Department of Transportation's inspector general.

The complaint has become part of a wider investigation, led by Rep. Jim Oberstar, of the FAA's supervision of commercial airline safety. The House Transportation and Infrastructure Committee has asked Mr. Thrash to testify at an April 3 hearing.

Mr. Thrash's testimony signals the House committee's investigation extends beyond recent problems with Southwest Airlines into other allegations of lapsed oversight in the Southwestern region, which includes Texas, Louisiana, Arkansas, Oklahoma and New Mexico.

Mr. Oberstar, D-Minn., has criticized the FAA's regulatory approach, which stresses partnership and information-sharing with airlines instead of investigations that lead to fines and other sanctions.

The FAA said it dealt with the Continental crew's mistakes with retraining and a written warning because its actions weren't intentional and crew members lacked written guidance about how to deal with the maintenance problem. Laura Brown, an FAA spokeswoman, said the agency didn't support the investigation that Mr. Thrash wanted to start.

Officials with Continental Airlines declined to comment.

The Continental crew escaped punishment by having its case accepted into the Aviation Safety Action Program (ASAP), through which pilots can avoid sanctions if they voluntarily report mistakes.

Mr. Thrash, an Air Force veteran who retired after 20 years from an FAA office in Houston in December, spoke this week to a reporter who independently learned about the accident and contacted him. Mr. Thrash stressed that his complaint was with the FAA's handling of the case, not with Continental Airlines or its flight crew.

"They washed their hands of the whole matter," Mr. Thrash said of FAA managers. "It was a cover-up."

The accident occurred on Jan. 16, 2006, as a team of maintenance contractors inspected a Boeing 737 for an oil leak. After finding a small leak, one mechanic requested the captain increase the engine thrust to 70 percent to conduct more checks, according to the National Transportation Safety Board's accident investigation.

The pilot couldn't see the mechanic, but he was told that the area around the plane was clear. At the time, a forward door was open and a woman in a wheelchair was about to board via a lift truck.

The crew didn't have FAA-approved training to perform a high-power engine run near the terminal.

Mr. Thrash said the pilots also failed to consult an operations manual, which they had in the plane. The manual spelled out procedures for dealing with maintenance problems at an airport with no Continental maintenance base, Mr. Thrash said.

The airline's separate maintenance manual prohibited engine runs above idle unless authorized by an airport; the El Paso airport had restricted engine power to idle at the terminal ramp since 1996.

Based on those apparent safety violations, Mr. Thrash began drawing up a list of questions for the crew, he said. A supervisor then told him to provide the questions to FAA inspectors who were on an "event review committee," which included two representatives from Continental.

A week later, the committee agreed that the case would be dealt with through ASAP, meaning Mr. Thrash had no further opportunity to investigate.

"I could not accomplish my job, which was to look at the actions of the crew," Mr. Thrash said. "It's beyond the pale of common sense to run an engine up to 70 percent of rated thrust with passengers on board and an unknown engine condition."

Ms. Brown said the crew relied on verbal instructions from the mechanics, who didn't have copies of the airline's maintenance manual and didn't call the airline to get advice about dealing with the leak.

The NTSB primarily blamed the mechanics.

The FAA also issued a written warning to Continental's maintenance controller, Ms. Brown said. The airline paid a $45,000 fine. The contract maintenance provider paid a $1,100 fine, she said.

The event committee included a Continental Airlines official and a representative from its pilots union. The third member was Paul LeBlanc, an FAA inspector in Houston who previously flew for Texas International Airlines, which merged with Continental in 1982.

Mr. LeBlanc said in an interview that he flew his last flight for the company in October 1983 but didn't consider himself a Continental pilot. He said he fully interviewed the crew and decided against legal sanctions because the crew's mistakes weren't intentional and they offered valuable insight.

"Now there are elaborate, written procedures that have to be followed by maintenance and by the flight crews before they do anything like that, whereas that was not in place before," Mr. LeBlanc said.

Mr. Thrash's former supervisor, John T. Merrifield, said in an interview that he generally disagreed with the practice of dealing with accidents through ASAP before investigating them.

However, he didn't demur when his own bosses overruled Mr. Thrash's complaint, Mr. Merrifield said.

"I just think that once an accident occurs, the accident investigation should take priority over ASAP," said Mr. Merrifield, who also retired last year.

The FAA found that Continental's pilots shouldn't have relied on the mechanic's instructions, according to federal records. The airline instituted new policies requiring pilots to better coordinate engine runs with their operations control center.

In February 2006, Mr. Thrash sent an e-mail to Marion Blakey, then the FAA's administrator, to complain about the FAA's handling of the incident and to urge a re-examination of the crew. The FAA looked into his complaint, but John M. Allen, the deputy director of flight standards service in Washington, upheld the event committee's decision.

Investigators from the inspector general's office interviewed Mr. Thrash and other FAA inspectors in Houston in October 2006, according to Mr. Thrash and Mr. LeBlanc. Mr. Thrash said he didn't hear from the inspector general's staff again until after he talked to a congressional investigator in February.

Mr. Oberstar's hearing will include at least 19 witnesses, according to the FAA. Two Irving-based inspectors who have been granted whistle-blower protection after pushing an investigation of Southwest Airlines' safety lapses are expected to testify.

An official close to the investigation, who asked to remain anonymous because he didn't have clearance to disclose names of witnesses, said Mr. Thrash is scheduled to testify as well.

Mr. LeBlanc said Mr. Oberstar's assault on the partnership programs is wrong-headed. The FAA that once stressed enforcement knew only about "5 to 7 percent of what was really going on out there," he said.

Now that carriers feel comfortable with sharing their errors, the skies are safer because "we have knowledge of about 90 or more percent of what's going on," he said.

But Mr. Thrash said the public would "be aghast" if it knew the type of errors accepted into ASAP, where they become confidential.

****

NTSB RELEASES 2007 AVIATION ACCIDENT STATISTICS

****

Washington, D.C. - The National Transportation Safety Board today released preliminary aviation accident statistics for 2007.

"The U.S. aviation industry has produced an admirable safety record in recent years," said NTSB Chairman Mark V. Rosenker. "However, we must not become complacent. We must continue to take the lessons learned from our investigations and use them to create even safer skies for all aircraft operators and their passengers."

The Safety Board's aviation accident statistics show that in 2007, there were 24 nonfatal accidents involving Part 121 airlines (aircraft with 10 or more seats). One fatality occurred involving a nonscheduled Part 121 aircraft when a mechanic was fatally injured while working on a Boeing 737 in Tunica, Mississippi.

No fatalities occurred among Part 135 commuter operators (fewer than 10 seats). However, on-demand (charters, air taxis, air tours and medical services when a patient is on board) Part 135 operations reported 43 fatalities (62 accidents, 14 fatal accidents), up from the 16 fatalities that occurred in 2006.

While the overall number of general aviation accidents rose from 1,518 in 2006 to 1,631 in 2007, the number of fatalities in 2007 was down from 703 to 491 (a 30 percent decrease), making it the lowest annual total in more than 40 years.

Foreign registered aircraft accounted for 11 accidents in the U.S. in 2007, with 3 fatalities from a single fatal accident. Of the 14 accidents involving unregistered aircraft, 6 were fatal and resulted in 7 fatalities.

The 2007 statistical tables are found at http://www.ntsb.gov/aviation/Stats.htm.

Tire Falls From Helicopter Into Ga. Home

The mystery of a tire that plunged from the sky and crashed through the roof of a home here now has an explanation.

Federal Aviation Administration officials told home owner Mark Brown on Tuesday that the wheel plummeted to earth from a helicopter owned by the Loganville-based Forever Green Landscaping. The wheel is part of equipment used to haul the helicopter around the landing pad during maintenance.

Officials said the equipment should have been removed before flight.

The company's owner told the Athens Banner-Herald he didn't know his helicopter had lost a wheel.

Brown said he and his wife returned home last Wednesday to find pictures knocked to the floor and cracks in a hallway's drywall. He crawled into the attic, where he saw a hole about the size of a loaf of bread in his roof, with a tire peeking through.

"When I crawled up there and saw it pushing through the roof, I thought, 'I must be dreaming,'" Brown, a mechanic, told the Banner-Herald.

The Walton County Sheriff's Office traced serial numbers on the tire to the landscaping company, FAA spokeswoman Kathleen Bergen said. The FAA is still investigating the incident, she said.

Monroe is 46 miles east of Atlanta.

NTSB Rules Failure To Execute Missed Approach Led To RJ Overrun

Shuttle America ERJ-170 Departed Runway On Landing At CLE

The National Transportation Safety Board determined that the probable cause of a February 2007 runway overrun incident involving an Embraer ERJ-170, operated by Shuttle America, Inc., was the failure of the flight crew to execute a missed approach when visual cues for the runway were not distinct and identifiable.

"Professional pilots have the daunting task of operating these passenger aircraft on a daily basis under a variety of weather conditions," said NTSB Chairman Mark V. Rosenker. "Their decision making process and training must be comprehensive enough to take all conditions into account."

As ANN reported, on February 18, 2007, Delta Connection flight 6448, an Embraer ERJ-170, operated by Shuttle America, Inc., was landing on runway 28 at Cleveland-Hopkins International Airport, Cleveland, OH during snow conditions when it overran the end of the runway, contacted an instrument landing system (ILS) antenna, and struck an airport perimeter fence. The airplane's nose gear collapsed during the overrun.

There were 71 passengers and four crewmembers on board. Three passengers received minor injuries.

The Board found that contributing to the accident was the crew's decision to descend to the ILS decision height instead of the localizer (glideslope out) minimum descent altitude. Because the flight crewmembers were advised that the glideslope was unusable, the NTSB states they should not have executed the approach to ILS minimums; instead, they should have set up, briefed, and accomplished the approach to localizer (glideslope out) minimums.

Also contributing to the accident was the first officer's long landing on a short contaminated runway and the crew's failure to use reverse thrust and braking to their maximum effectiveness.

When the first officer lost sight of the runway just before landing, he should have abandoned the landing attempt and immediately executed a missed approach.

Furthermore, the report states had the flight crew used the reverse thrust and braking to their maximum effectiveness the airplane would likely have stopped before the end of the runway. The Board concluded that specific training for pilots in applying maximum braking and maximum reverse thrust on contaminated runways until a safe stop is ensured would reinforce the skills needed to successfully accomplish such landings.

In its final report on its investigation, the Safety Board noted that the captain's fatigue, which affected his ability to effectively plan for and monitor the approach and landing, contributed to the accident. By not advising Shuttle America of this fatigue or removing himself from duty, the captain placed himself, his crew, and his passengers in a dangerous situation that could have been avoided, the Board said.

Another contributing factor to the accident was Shuttle America's failure to administer an attendance policy that permitted flight crewmembers to call in as fatigued without fear of reprisals. The policy had limited effectiveness because the specific details of the policy were not documented in writing and were not clearly communicated to pilots, especially the administrative implications or consequences of calling in as fatigued.

As a result of the investigation of this accident, the Safety Board made recommendations to the Federal Aviation Administration in the following areas: flight training for rejected landings in deteriorating weather conditions and for maximum performance landings on contaminated runways, standard operating procedures for the go-around callout, and pilot fatigue policies.

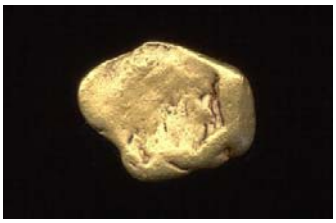
AUDIO SAFETY TALKS!

FATIGUE CAN BE FATAL

Workplace fatigue is more common than most employers might like to admit or know about. This is particularly true when workers have to switch shifts, for example, from day to night. It's also true that night workers often sacrifice rest to perform the activities that help us to lead a normal life, such as recreational activities or spending time with family. Your workers need to know the risks of shorting themselves on rest, and of overexertion at work. A tired worker is less productive than a well-rested one. And an injured worker is less productive than either.

To listen to the talk, click this link

Midnight Shift Nugget



The Night People

You've never been one to go along with the crowd. So it makes sense that you have chosen shiftwork to make your living. Shiftwork isn't necessarily easy, but it can create some opportunities not available to day workers.

Many people choose shiftwork because it suits their body rhythms. They are more comfortable working in the evening or overnight than starting in the morning. For others, shiftwork allows them to do other things in the daytime, such as care for their children or pursue an education. Shiftwork premiums are also attractive to some, as well as a different, relaxed work culture at night.

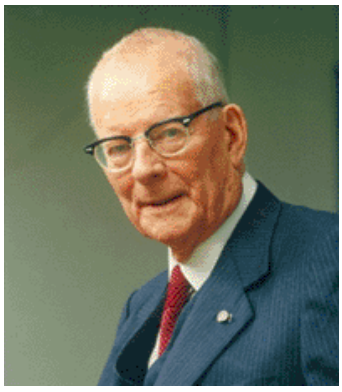
Whatever your reasons for working shifts, you might want to consider some advice about how to maintain your safety and health while doing so. A big part of shiftwork success is getting enough sleep:

- **Work out a sleep schedule that suits you. As much as possible, get up and go to sleep at the same time each day, even on weekends. If your sleep schedule must vary, try to ensure that at least four hours of your sleeping period occur at the same time each day.**
- **Try to sleep in a cool, dark room. Use heavy curtains, shades and possibly ear plugs to muffle sounds. Even a radio playing softly or a fan humming steadily can help to mask disturbing noises.**

- **Use a routine to unwind before going to bed. Follow regular habits such as reading or drinking a warm beverage (avoid alcohol and caffeine) before you try to go to sleep.**
- **Enlist the co-operation of family and friends in helping you to sleep undisturbed. Simply letting others know of your sleep and work schedule could help prevent interruptions. It might help to post your schedule where others can see it. A "do not disturb" sign on the front door or the bedroom door could also be useful.**
- **Seek help from your family and friends in rescheduling events so that you can take part. Make an effort to build a social life into your schedule.**
- **Eat regular, well-balanced meals to help maintain your health.**
- **Exercise on a regular basis to enable yourself to sleep (and work) better.**
- **Find ways to relax regularly. Take your scheduled work breaks and make sure you have some time for recreation.**
- **Avoid use of drugs such as sleeping pills and stimulants. Alcohol, cigarettes and coffee can all add to sleep disturbances and lower your ability to cope with shiftwork.**
- **Take into account the possibility you might be more injury-prone if you are working shifts. Stay alert, and follow all safe work practices.**

Shiftworkers face these challenges: Shortage of sleep, sleep disturbances, fatigue (both physical and mental), digestive problems, stress, a feeling of isolation from family, friends and the community. Use healthy coping strategies to make shiftwork safe and successful for you.

Aviation Safety Managements Systems



What would W. Edwards Deming say about aviation safety management systems? Deming died in 1993 but many of his quality and management principals and concepts keep surfacing in new applications and under new terms, for example, safety management systems (SMS) for aviation are a "new" concept being touted by the FAA and ICAO. In the post WWII era, Japan made phenomenal advances in the field of product quality control/assurance and attributed this largely to the visions of Dr. Deming.

Deming's ideas then were somewhat radical, diverting from traditional quality control to quality assurance, i.e. not having to inspect every item made but using other techniques to ensure conformance to specifications.

In fact, it was a systems approach to quality but involved the whole related organization complex. Customer input and statistical quality processing or control were mainstays in Deming's approach, which also focused on an organization's management philosophy and leadership qualities as well.

His main principals are found in his 14 Points, Seven Diseases, and his PDCA Cycle (Plan-Do-Check-Act). Besides the Japanese wide-spread adoption of the "Deming Way" or "Deming Management Method" as it then became to be known, several U.S. organizations also took to it and reported vast improvements in efficiency, production figures, worker moral, profit and even safety. It was viewed as a radical way to change and improve things. However, for some company leaders it was too much and too radical of a change. And back then there weren't regulatory authorities like the FAA or ICAO backing up or pushing the adoption of SMS providing the tipping point.

Deming's position was that the whole package needed to taken on, not just some parts. It is fair to say virtually every industry and organization adopted or adapted some aspects of the Deming Way. By the mid-1980s, other improvement fads came along many springing up from the Deming roots, e.g. Total Quality Management, Zero Defects, Six Sigma, Management by Objectives, Safety Culture, etc.

There are numerous books and articles on Deming and his beliefs and real applications of his methods and my favorites are his book "Out of the Crisis" (1982) and "Deming Management at Work," (1991) by Mary Walton.

Anyone familiar with SMS, first applied to airports and now being applied to airlines, and familiar with Deming would have to say they are near one in the same. Put even more simply — SMS is Deming reincarnate. The prophet of hope, improvement, efficiency and quality still lives among us.

Though he was not a safety guru per se, he did show how safety and regulation and related policies affecting overall safety needed substantial improvements and some U.S. companies did apply his ways with success in their organizations.

And so what would Deming's words be if he was around today regarding the emerging safety management systems? I can imagine he might say, "I told you the same things back then but you weren't listening."

Deming's 14 points (excerpted from Chapter 2 of "Out of the Crisis"):

1. **Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.**
2. **Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.**
3. **Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.**

4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.
5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.
6. Institute training on the job.
7. Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job.
8. Drive out fear, so that everyone may work effectively for the company.
9. Break down barriers between departments. People in research, design, sales and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.
10. Eliminate slogans, exhortations and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships.
11. Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.
12. Remove barriers that rob people in management and in engineering of their right to pride of workmanship.
13. Institute a vigorous program of education and self-improvement.
14. Put everybody in the company to work to accomplish the transformation.

Employee killed by speeding Air India coach

Mumbai An airport employee died when he was hit by a speeding coach at the Mumbai airport. 40-year-old Dnyaneshwar Kunte, was helping load a Kenya Airways flight, when a speeding Air India coach hit a trolley, which fell and crushed him to death.

Cambata Aviation employee, Ramesh Tiwari said, "The coach was speeding, and was also very close to the flight — which is against safety norms."

It's not clear if the accident was caused by drunken or reckless driving, or if the driver, who is now absconding, fell asleep at the wheel, but eyewitnesses say key safety procedure was flouted.

The approved speed limit for vehicles on the tarmac is 40 kmph the coach was clearly going faster than that.

Vehicles are also required to maintain a distance of 150 metres from the aircraft, but the coach drove right under the plane's wing.

A statement from the Airport authorities admits a space crunch at the airport increases the chance of such accidents.

Kunte was an employee of Cambata Aviation, which provides ground personnel services at the airport. Shortly after the mishap, his colleagues went on a strike that lasted six hours — causing considerable inconvenience to passengers.

"I landed from Dubai at 4 am, but got my bags only at 10 am," said passenger Kaushik Madhvani.

This is the latest in a series of mishaps at major airports across the country. In October 2007, an Air Deccan employee, Sanskriti Sinha, was killed in a similar hit and run case at the Delhi airport.

China Eastern admits 'human factor' in flight returns

China Eastern Airlines admitted yesterday that last week's "disgraceful" incidents at its Yunnan Branch Co., where 21 flights departing the airport turned around and returned, were the result of a "human factor," most likely disgruntled pilots.

The flights, which were scheduled to leave Kunming for Dali, Lijiang, Banla, Mangshi, Simao and Lincang, took off but then returned, causing significant delays at the airport. CEA originally cited weather as an explanation even though other carriers operating from the provincial capital completed their flights successfully.

The airline said the incidents are under investigation and that it already has dismissed two senior officials from the Yunnan Branch Co. CAAC also is investigating, and both CEA and the regulator noted that "severe punishments" await the responsible parties once the events become clearer.

CEA is not alone in suffering from pilot discontent. Last month, 11 pilots from East Star Airlines took "collective leave" due to a labor dispute with the carrier while more than 40 Shanghai Airlines pilots staged a sickout citing unfair treatment. In addition, 22 Hainan Airlines pilots have resigned since 2006 without first securing permission from the company.

jetBlue AIRWAYS

AMTSociety Maintenance Skills Competition Showcases the Best of the Best

AMTSociety, an affinity group comprised of aircraft maintenance professionals, announced the winners of its first annual AMTSociety Maintenance Skills Competition held during the Aircraft Maintenance Summit at Aviation Industry Expo in March.

The AMTSociety Maintenance Skills Competition gives aircraft maintenance technicians, both licensed and student A&P mechanics, and U.S. military personnel involved in the aircraft maintenance field, the opportunity to test their combined and individual abilities against their peers. The competition featured both team and individual events.

A total of nine teams entered the first competition which included 11 events. Taking first place was Continental Airlines. The Continental team included Rene Hansen, Brian Hall, Frank Dudek, Nagy Mouhanna, and coach Russell Petersen. Second place was won by Aviation Institute of Maintenance (AIM) N.W. Region. The Aviation Institute of Maintenance entered four separate teams. The AIM NW team included Paulina Gregory, Eric Johanson, Don Nugent, Stephen Ritter, and coach Glori Berkel. Third place was awarded to American Airlines; the team was organized by Dave Hayden and included Phil Firmano, James Labrecque, Robinson Torres, and Joseph Haczela.

The individual program featured three events, hardware identification, safety wiring and a written test of aviation's first aircraft mechanic, Charles E. Taylor. The winner was Steven Orville from the Redstone College, LA Campus.

Plaques and Snap-on Tools were awarded to the winners. The funds raised from the event go to the Northrop-Rice Foundation for the AMTScholarship Awards: the Charles E. Taylor Scholarship for $1,500 and the William F. O'Brien Scholarship for $1,000. To learn more about AMT magazine and the AMTSociety, log onto AMTonline.com.

jetBlue AIRWAYS

TOP 10

Most Dangerous Jobs

What kind of worker is most likely to get killed on the job? As a matter of statistics, the answer is an occupation that involves transportation or transport of materials. Number one on the list is a tie between loggers and aircraft pilots. Here's the complete Top 10.

Statistically, loggers are the most likely to be killed on the job

RANK	OCCUPATION	DEATHS/100,000	TOTAL DEATHS
1.	Logging workers	92.4	85
2.	Aircraft pilots	92.4	109
3.	Fishers & fishing workers	86.4	38
4.	Structural iron & steel workers	47.0	31
5.	Refuse & recyclable material collectors	43.2	35
6.	Farmers & ranchers	37.5	307
7.	Roofers	34.9	94
8.	Electric power line installers/repairers	30.0	36
9.	Driver/sales workers & truck drivers	27.6	905
10.	Taxi drivers & chauffeurs	24.2	67

SOURCE: U.S. Bureau of Labor Statistics, figures are from 2005

GO FIGURE

Work Zone Safety

What does this number represent?

3,000

Answer: It's the approximate number of work zones that are expected to be present on the U.S. National Highway System during peak construction season this year.

Here are some other work zone statistics:

1,010 persons were killed in motor vehicle crashes in work zones in 2006

85% of those killed in a work zone were drivers or vehicle occupants

15% of fatalities in work zones were workers, pedestrians and bicyclists

160 work zone injuries occur every day (one every 9 minutes)

12 billion vehicle miles of travel this year will be through active work zones

Source: Federal Highway Administration

POP QUIZ

A Sign of the Times

What does this sign mean?

You probably recognize it as the sign of a flagger ahead.

But do you and your workers know the signs indicating a worker is in or near a roadway? Or the flagger sign that says you should stop your car? Or the sign indicating a two-lane shift? Do your workers know when work zone signs are in effect?

Here's a link to a short quiz offered by the Federal Highway Administration on the signs, signals and cones that drivers can expect to find in a work zone.

(Don't be put off by teen drivers focus. Drivers of all levels of experience will benefit from the review.)

Take the quiz here.
http://www.workzonedriver.org/Teens/Know_the_Signs/Know_the_Signs_q1_framset.htm

4 small lifestyle changes that can give you 14 extra years

If your New Year's resolve to eat better and be more active is wearing thin, here's some news that may help bolster your efforts: scientists have reported that people who engage in just four healthy behaviors — eating five or more servings of fruits and vegetables a day, drinking moderately, not smoking, and getting some kind of physical activity daily — live 14 years longer, on average, than people who don't have these habits. This finding, published in the January 2008 issue of the journal *Public Library of Science Medicine,* held true even among people who were overweight.

British researchers with the European Prospective Investigation into Cancer and Nutrition (EPIC) kept track of 20,244 healthy men and women, ages 45 to 79, who filled out health behavior questionnaires between 1993 and 1997. Participants were given one point for each of the following healthy habits: not smoking, taking one to 14 drinks per week, having some level of physical activity (at the very least, a job that required standing or up to one-half hour of daily recreational activity), and having a blood level of vitamin C that was consistent with eating five or more servings of fruits and vegetables a day. At the start of the study, all of the volunteers were free of cancer, cardiovascular problems, or other health concerns that would put them at risk for premature death.

After accounting for age, sex, body mass, and social class, the investigators found that those who had a health behavior score of four were four times less likely to die prematurely than people who had a score of zero — an advantage equivalent to being 14 years younger. Those with a score of two were two times less likely to have died. The greatest effect was seen in deaths attributed to heart disease and stroke. Interestingly, vitamin supplements were not associated with greater longevity.

These findings will need to be confirmed in other populations and evaluated for their effect on quality of life, but they do suggest that a handful of moderate lifestyle changes can substantially reduce our risk for premature death — particularly from cardiovascular disease.

In this study, higher vitamin C levels in the blood were associated with extra years, but that doesn't mean that vitamin C supplements would have the same effect. It's not "vitamin C by itself that's related to mortality," explains Dr. Kay-Tee Khaw, one of EPIC's principal investigators, "but rather that vitamin C is a good marker for dietary intake of plant foods, [which] have many more bioactive nutrients than vitamin C alone that may be related to health."

For more information on healthy aging, order our Special Health Report, *Living Better, Living Longer*, at www.health.harvard.edu/LLLB.

Picture This!

Whose *can* will be broken first?