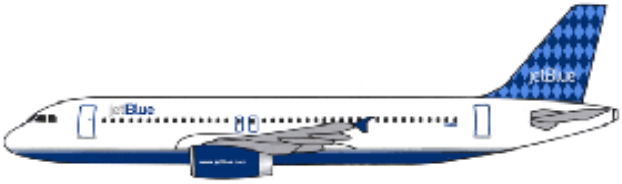

Aviation Human Factors Industry News

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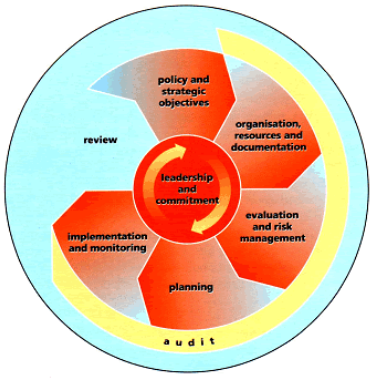
NATA's Russ Lawton on Safety Management System Requirements



For air charter operators and other aviation companies that are confused about the impending safety management system (SMS) requirement, and what the Federal Aviation Administration is doing about it, is an issue that Russ Lawton, National Air Transportation Association's director of safety and security can address. The International Civil Aviation Organization (ICAO) will require countries to implement a SMS by Jan. 1. However, Lawton points out that the FAA is moving slowly, and an actual SMS adopted by the agency is years away.

Does that mean that operators shouldn't develop a SMS now? Not according to Lawton. He said one good reason to get moving now is that if you operate outside of the United States, your business will most likely be affected long before any new FAA rule is adopted.

"Some countries are already raising the possibility of prohibiting anyone without an officially recognized SMS from operating in their airspace. This policy could extend to landing slots as well," Lawton writes in his article, *When Will SMS Be Required?* His article, published in Aviation Business Journal Safety 1st is a must read for all operators and air charter brokers.

Engine nut was loose before TV copter crash, feds say

State troopers investigate the site of an Oct. 13 helicopter crash in Montgomery County, which killed the pilot and a photographer on assignment with KTRK Channel 13.

A loose nut was discovered in the engine of a helicopter that crashed last month, killing the pilot and photographer on assignment for Houston TV station KTRK (Channel 13).

But federal investigators still have not determined the cause.

The "finger-tight" nut was connected to the PG line, according to the National Transportation Safety Board report released this week.

The PG, or power governor line, ensures that the engine is producing enough power to maintain rotor speed, said Ladd Sanger, an aviation attorney, who has handled many helicopter crashes.

The report also noted that one of the helicopter's tail rotor blades was bent 90 degrees. That's an indication of engine failure, Sanger said.

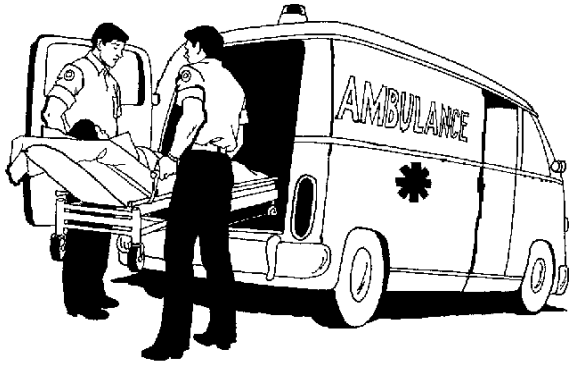
A final report listing the cause of the Oct. 13 accident could take as long as a year, according to federal officials.

The Bell 206L-4 helicopter's engine lost power and descended nose down, crashing into a wooded area in southwest Montgomery County shortly after 11 a.m.

The pilot, John Downhower, and the photographer, David Garrett, died. They were employed by contractors who provide services to KTRK, an ABC affiliate. The men were on their way to cover a shooting when the helicopter went down.

The aircraft was owned by Helicopters Inc. and leased to Metro Traffic, which is owned by Westwood One.

Civilian Worker Injured At Groton Helicopter Facility



A worker at the Connecticut Army National Guard's aviation maintenance facility at Groton- New London Airport was hurt Monday when he was run over by a helicopter that was being towed into a hangar, a guard spokesman said.

The injured man, a Department of Defense civilian employee, suffered compound fractures to a leg, Lt. Col. John Whitford said.

The man, whom officials would not identify, was one of four people involved in moving the UH-60 Black Hawk helicopter, an operation that takes four people, Whitford said. One person operates a tug that tows the aircraft, a second person sits in the helicopter and operates its brakes, and the remaining two are wing walkers who guide the aircraft.

"This person was a wing walker and was apparently run over by the left front tire of the aircraft, causing possible multiple compound fractures," Whitford said. The accident occurred about 2:45 p.m.

The injured man was taken to Lawrence & Memorial Hospital in New London.

Such movements occur several times at day at the repair facility, which is known as AVCRAD (Aviation Classification Repair Activity Depot). Workers at AVCRAD — both military and civilian — maintain Army helicopters in 14 states, from New England west to Ohio and south to Virginia.

Maj. Gen. Thaddeus J. Martin, adjutant of the Connecticut National Guard, has ordered an investigation into how the accident happened. Pending the outcome, the workers involved have been decertified and can no longer move aircraft, Whitford said.

Woman Deplanes, Walks Into Moving Prop At FDK

Right Arm Partly Severed, Woman Taken To Specialists

A woman deplaning from a Cessna at Frederick Municipal Airport (FDK) in Maryland November 6 is lucky to be alive, after walking into the moving propeller of the airplane.

FAA spokesman Jim Peters said the Cessna 172 landed at FDK about 7 pm and proceeded to the ramp in front of the main terminal building, the Frederick News-Post reported.
Exiting from the left side of the plane and heading for the restaurant in the terminal building, the 19-year old woman walked around the front of the plane where the propeller struck and partly severed her right arm, according to Frederick Police Department reports.

Police spokesman Lieutenant Richard Hetherington said a Maryland State Police flight medic was on the scene when Frederick Police officers arrived about 7:10 pm. The woman was medevaced to Union Memorial Hospital in Baltimore, where hand and arm specialists waited to treat her injury.

Man agrees to stay away from airplanes

Selinsgrove airplane mechanic who is serving a 51-month prison term has reached a settlement in a suit brought by the federal government.

Brian Daniel Snyder, who operated Smooth Landings at the Northumberland County Airport, near Elysburg, has agreed that a preliminary injunction that prevents him from working as an airplane mechanic will become permanent.
The Federal Aviation Administration has agreed to waive any civil penalty in light of Snyder's criminal conviction that includes, besides the prison term, a three-year period of supervised release and restitution of $80,329.

The sentence of U.S. Middle District Senior Judge James F. McClure Jr. also prohibits Snyder from doing airplane work or being a pilot while on supervised release.

Snyder pleaded guilty in April to charges of fraud involving aircraft parts between November 2002 and January and interstate transportation of stolen property.
He admitted he stole a plane in Fort Lauderdale, Fla., which he had intended to buy, flew it to Pennsylvania and sold it for $60,000. The Florida owner had reneged on an agreed-to purchase after a down payment check from Snyder bounced.

The fraud charge accused Snyder of forging the name of an FAA inspection mechanic on 141 documents, forging the names of other certified mechanics 28 times, backdating and illegally signing maintenance documents 27 times after his certifications had been revoked Oct. 2, 2006, and falsifying records 48 times to conceal he used parts stolen from other aircraft.

McClure found there were 65 victims in the case, but Assistant U.S. Attorney Bruce Brandler noted there have been more complaints. Those people will have recourse through civil litigation if they choose to seek damages, he said.
At his sentencing in federal court, Snyder apologized for his actions and said he wants nothing more to do with the aviation industry. (And we want nothing more to do with the likes of him! – RH.)

What Should Mechanics Know About a Surface Incident and a Runway Incursion?

A surface incident is a broad term encompassing all movement areas (including runways and taxiways) and is "any event where unauthorized or unapproved movement occurs within the movement area, or an occurrence in the movement area associated with the operation of an aircraft that affects or could affect the safety of flight." Surface incidents may be caused by pilots and reported as pilot deviations (PD), by vehicle drivers or pedestrians and reported as vehicle/pedestrian deviations (V/PD), or by air traffic control and reported as operational errors/deviations (OE/OD).
A V/PD report includes incidents caused by mechanics taxiing and/or towing aircraft. The FAA further classifies a surface incident as either a runway incursion or a non-runway incursion.

A runway incursion is "any occurrence on the airport runway environment involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in a loss of required separation with an aircraft taking off, intending to take off, landing, or intending to land." The F.A.A. knows who, what, where and the when aspects of a surface incident or runway incursion, but not always the why. Under the voluntary Runway Incursion Information Evaluation Program (RIIEP), questions have been designed to help answer the why. For example when a mechanic taxiing an aircraft is involved in an incident and decides to participate in RIIEP, some basic questions will be posed, such as:
(1) Was the mechanic familiar with the airport layout?
(2) Were airport signs, lights or markings contributing factors?
(3) Did language or clearance interpretation problems contribute to the event?
(4) Did radio communications play a role?
(5) What does the mechanic believe caused the incident?

The repositioning of aircraft is usually accomplished by either taxiing or towing and may require the mechanics to enter the movement area.
Since January 2000, mechanics have been involved nationwide in approximately 178 surface incidents/runway incursions. After analyzing the incident reports, it was found that the mechanics did not have any problem with communications, or communicating with air traffic.

As a matter of fact, air traffic reported mechanics had acknowledged the taxi/tow instructions and read the instructions back correctly; however, they still proceeded into the movement area, crossed active runways, and entered active taxiways without proper authorization or clearance.

Know what you are acknowledging and maintain situational awareness while operating within the airport movement area.

Levere Deane, American Airlines Crew Chief JFK
[reprinted from the November 1, 2008, JFK The Facts Exchange.]

CALLBACK ASRS
From NASA's Aviation Safety Reporting System

The "Dirty Dozen" in ASRS Maintenance Reporting

"Complacency"

Complacency is a state of self-satisfaction that is often coupled with unawareness of impending trouble. A maintenance technician learned that it is risky to assume that someone else has given you the right part.

Complacency: Failure to verify effectivity

- **Aircraft 'X' came in with #2 engine, system #1 ignition on MEL. After pushback the #2 engine would not start. We called for the Control Center to order us 2 exciter units, which I installed. The operational check failed. At this point it was the end of our shift. In order to avoid paperwork issues with the next shift, I signed off the log page as replaced units test fails and opened a new log page. Today I found out in (computer system) that the next shift had to replace both exciter units again due to (incorrect) effectivity, which fixed the problem. Next shift found the problem and it was corrected before flight. I should have verified the effectivity, not assume the (controller) ordering the parts would do so.**

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FAA Renews, Toughens Warning to Boeing 737 Pilots

The US FAA has published an urgent airworthiness directive (AD) requiring a crew pre-flight briefing about the functioning of the cabin altitude warning system for all models of the Boeing 737.

Despite an FAA AD published two years ago, following the fatal crash near Athens on 14 August of a Helios Airways 737-400 caused by crew hypoxia when the cabin failed to pressurize, the directive acknowledges that there have been further incidents of pilot failure to recognize the activation of the cabin altitude warning system.

The latest AD becomes effective as a final rule on 25 November without a consultation period, but comment is invited, and a 120 day implementation period for operators is being allowed.

Each crew, says the AD, must carry out a briefing before the first flight of the day on what to expect from the cabin altitude warning system so they do not ignore its alert. The FAA says: "Because of the dual purpose of the intermittent cabin altitude/takeoff configuration warning horn, this briefing serves to remind to flight crews that the sounding of the cabin altitude warning horn in flight requires immediate action, beginning with the immediate donning of oxygen masks."

Crew operations manuals must require the briefing to be used by crews "on airplanes in which the CABIN ALTITUDE and TAKEOFF CONFIG lights are not installed, or are installed but not activated." This, says the AD, "will be included as an additional item on the takeoff briefing before engine start for the first flight of the day, or following any change of either flight crew member".

The FAA requires that the pre-flight briefing must include the following verbal reminders:

"Whenever the intermittent warning horn sounds in flight:

1) Immediately, don oxygen masks and set regulators to 100%

2) Establish crew communications

3) Perform the CABIN ALTITUDE WARNING OR RAPID DEPRESSURIZATION checklist

It also requires that both pilots should verify, on the overhead cabin altitude panel, that the cabin altitude is stabilized at or below 10,000ft (3,000m) before removing oxygen masks.

Continuous Improvement

In line with 20 years of steady growth in human factors awareness and training, here's what needs to happen now.

The joint FAA-ATA annual International Symposium of Human Factors in Maintenance and Ramp Safety saw its 20th anniversary this September in Orlando. Speaking at the conference, Nick Sabatini, associate administrator of safety for the FAA, called attention to improvements made in the field of human factors since the first meeting two decades ago.

The first issue identified for improvement sounded simple: communication. At the initial meeting, Sabatini said participants decided this was the biggest human factors issue affecting maintenance. Networking, commitment and improved communications have helped aviation maintenance organizations gain ground in solving this problem. "Whether you are in China, Europe or the Americas," he said, "maintenance and ramp personnel are using the same vocabulary and the same tools to address human performance challenges."

While communication still is a challenge, it's much improved. Sabatini said. He identified the Dirty Dozen, Boeing's Maintenance Error Decision Aid (the MEDA process) and other breakthroughs such as the PEAR model in understanding the essential components of a safety culture as a means of improvement.

FAA also has initiated a project to help incorporate non-routine audits such as Line Operations Safety Audits in maintenance environments and on the ramp. It's likely to become an integral part of Safety Management System (SMS) activities as they evolve, Sabatini added. "This program permits peers to formally observe normal day-to-day operations and identify what is going right and also document opportunities to improve,: he said.

Effective analysis of critical safety data is key moving forward. This means discerning trends, identifying precursors and sharing the wealth of learned knowledge. Sabatini cited FAA's Aviation Safety Information Analysis and Sharing (ASIAS) initiative as an example.

Even in its 'early days',' ASIAS compiles data for ASAP and FOQA, internal FAA datasets and other data for analysis, he said. It so far has been used to identify preconditions for wrong runway departures, for Enhanced Ground Proximity Warning Systems alerts and for TCAS Resolution Alerts. FAA soon plans to add ASAP data from air carrier maintenance employees and from MRO organizations to ASIAS.

And, FAA aims to make strides in addressing fatigue among aviation mechanics. The agency sponsored its first fatigue management symposium earlier this year and Sabatini noted attendees met important goals. The meeting saw an exchange of new information on fatigue physiology, management and mitigation alternatives, free flow of information and perspective among scientists and decision makers; and much discussion on best practices. "Most in the group (of maintenance professionals) were not ready to sit and wait for specific duty-time regulations," he said. "The better course was seen to be integrating fatigue management as a fundamental element of safety management." Look for FAA guidance material on fatigue to emerge as a result of this discussion.

Flight Safety Foundation Calls for Stronger Protection of Volunteered Aviation Safety Information

In the wake of recent judicial decisions forcing disclosure of voluntarily supplied aviation safety information, and the use of aviation accident investigation reports in civil litigation and criminal prosecutions, the Flight Safety Foundation (FSF) announced its support for statutory protection against the release or use of information gathered by voluntary self-disclosure reporting programs.

"We can and must do everything possible to ensure the continued flow of critical safety information that is increasingly coming under assault in courts around the world," said FSF President and CEO William R. Voss.

In remarks here before the FSF International Air Safety Seminar, FSF General Counsel Kenneth P. Quinn noted the increasing tendency to criminalize aviation accidents and said, "Since prosecutors and courts are not protecting the confidentiality of voluntarily supplied safety information, legislatures need to step in to prevent critical sources of safety data from drying up."

FSF endorses the creation of a "qualified exception" from discovery of voluntary self-disclosure reporting programs, similar to the protection already provided in U.S. law against use of cockpit voice recorder (CVR) and surface vehicle recordings and transcripts. Examples of such voluntary self-disclosure reporting programs include the Aviation Safety Action Program (ASAP), the Flight Operational Quality Assurance program (FOQA), and the Aviation Safety Information Analysis and Sharing (ASIAS) system.

Airlines and regulators increasingly are using these and other tools to obtain predictive information that allows preemptive interventions to be developed to mitigate threats revealed by the data instead of relying on forensic evidence after a crash. "We cannot tolerate waiting for a crash to show us there is a safety problem that needs to be fixed," said Voss.

By most estimates, nearly 98% of safety information currently obtained from voluntary disclosure programs would not be available if program participants are exposed to prosecution and reprisal.

FSF recommends the adoption of stronger protections to shield such information from disclosure in any judicial proceeding, except to allow limited discovery when a court decides that the requesting party has demonstrated a particular need for the information, and that the party would not receive a fair trial if the information is not provided. If discovery is permitted, FSF urged that it only be made available under protective order, and not generally be made available to the public.

The FSF announcement comes on the heels of reports that American Airlines and its pilot union abandoned their 14-year old ASAP program, and a judicial decision concerning the 2006 Comair crash in Lexington, KY, that ordered the release of ASAP reports, saying that Congress had the power to protect the ASAP information, as it had with CVR recordings and transcripts, but had not done so. Further, several recent criminal prosecutions in Europe have sought to establish criminal culpability through the use of information voluntarily provided to accident investigators.

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Two Women Make Dream Come True

Hong Soo-in, right, and Shin Soo-jin, Korean Air pilots, show thumbs-up gesture in front of an aircraft at the airline's hangar, western Seoul, Tuesday. They became Korea's first female civil aviation pilots.

1st Female Pilots Born in Korean Civil Aviation.

Two women became pilots Tuesday for the first time in the 60 years of Korean civil aviation history. They are Shin Soo-jin, 39, and Hong Soo-in, 36, who have worked at Korean Air as copilots.

They became pilots for the B737 airplane after passing the qualification test organized by the Civil Aviation Safety Authority Monday.

They are the only women among the nation's 1,700 pilots.

``I'm so glad that I've achieved my longtime dream,'' Shin said. Hong also said she was happy to have completed the tough training course and passed the test.

Both Shin and Hong joined Korean Air in 1996. Shin became the first female copilot for a MD-82, a small-size aircraft, and for a jumbo jet B747-400 in 2001.

Hong entered the Korea Aerospace University, but majored in information and telecommunication engineering, not flight operation, a major which allowed only men at that time in 1995. ``The school said the flight operation department would select females a few years later, so I decided to enter the school first and change my major later,'' she said.

As a person in charge of every stage of flight, strict qualifications are required for a pilot: more than 4,000 hours of flying experience including 350 landings, at least five years of experience after becoming a copilot, certificates for aviation radio communication and aviation English, as well as special education and training.

Shin has 4,483 hours of flying experience, and Hong, 5,533 hours. Despite their careers, they had to undergo harsh training for the last five months to prepare for the qualification test. At the last test Monday, they flew between Seoul and Ulsan, carrying examiners who tested their ability to cope with an emergency.

``As we did, junior female pilot-hopefuls will have to undergo tough challenges. I believe in their capability,'' Shin said.

Both of them said that airplanes are operated by high-tech devices, not by physical strength, so women, usually more meticulous than men, have an advantage.

As of September, there were 1,826 copilots in Korea, with Korean Air having five females including Shin and Hong, and Asiana Airlines, four.

Shin and Hong will have their maiden flight as pilots on Nov. 15. ``I want to contribute to the development of civil aviation through safe operation,'' Shin said. ``I want to carry passengers as comfortably as possible until I retire,'' Hong said.

Flex Wrenches Help Expose Hidden or Recessed Fasteners

InventHelp/Intromark Inc. has launched its Flex Head set of wrenches, which can bend to access hard-to-reach line fittings, or hidden and recessed fasteners. The Flex Head line employs a 270-degree wrap-around head and comes in a set of five different wrenches, or a set of six metric-size wrenches. Applications include aircraft, such as with airline technicians, and other heavy equipment. Intromark, 800-851-6030 or visit http://www.unseenontv.com/Detail.aspx?Id=73

Avionics instructor's devotion rewarded

NEW AGE AVIONICS: RNZAF Sergeant Malky Hamilton transforms training methods for avionics technicians.

The name Malky Hamilton may go down in New Zealand history as the man who revolutionized the training of RNZAF avionics technicians.

In the meantime, Sergeant Malcolm Hamilton must make do with a medal for outstanding zeal and devotion to duty, to be presented today in an award ceremony at RNZAF Base Woodbourne.

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Helped by a small team of avionics technicians and mechanics, Mr. Hamilton (Malky to friends) was the project leader behind a glass cockpit trainer for RNZAF avionics technician trainees.

Avionics are the aviation electronics which run an aircraft's communication, navigation, monitoring, aircraft flight control and collision-avoidance systems.

Avionics made up the biggest part of any development budget in military aircraft, Mr. Hamilton said, so it made sense to have top teaching tools for trainees to identify and learn how to repair any likely faults.

Simulating a real aircraft was Mr. Hamilton's goal.

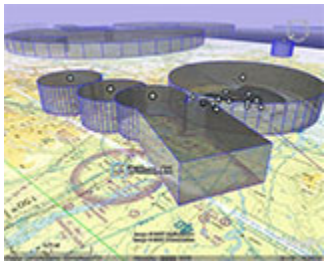
"We're not teaching them to fly, but to know how to carry out maintenance checks."

After a year's work, he and a team of maintenance and software workers developed a cost-effective, 747 glass cockpit simulator.

Glass cockpits have CRT screens and LCD displays instead of the stem gauges and dial systems used by planes from earlier eras. While the RNZAF's fleet of NH90 helicopters, P-3 Orions and C130s Hercules are from that earlier era, all will be fitted with glass cockpits in the next three years.

The glass cockpit simulator Mr. Hamilton's team designed can replicate any aircraft once the relevant software is inserted.

ChartGeek Offers Free Samples



Lots of pilots enjoy the aerial views possible in Google Earth, and now a company called ChartGeek is offering a way to see aeronautical chart info displayed right inside your Google Earth view. The ChartGeek charts allow pilots to "see" details such as VFR flyways, weather, and airspace classifications, rendered in 3D and accurately placed according to the FAA/NACO geographical coordinates. Users can also choose to fade the chart away to show details of the underlying terrain. "Pilots' ability to 'pre-fly' their routes using ChartGeek Charts in Google Earth greatly improves their ability to recognize key waypoints and landmarks that they have not yet seen," says the company. Each 3D chart is derived from an authorized FAA/NACO digital chart. During November, members of EAA or AOPA can download a free sample of a Sectional or TAC chart from ChartGeek. Anyone who is not a member can try it out for $3.99.

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To get your free chart, go to ChartGeek.com and look for the EAA or AOPA link. Google Earth is a free download from Google. And sorry, Mac users, the ChartGeek charts are Windows compatible only.

Drowsy Driving Consequence

Nicole Michelle Lee

June 22, 1989 - Jan. 26, 2008

Nicole Michelle Lee was killed in a car accident on Jan. 26, 2008. The driver fell asleep, hitting a tree going 55 MPH. There were no skids or brake marks. All five students in the car were Honor Students at Virginia Tech.

They were on their way back to college from a skiing trip to Snowshoe Resort West Virginia.

My daughter, Nicole, was in the front passenger seat of a 1999 Nissan Pathfinder headed along US 219 in Greenbrier County when the car left the road and hit the tree. She had to be cut out of the wreckage. We were not notified for a couple hours and had not enough time to travel to that part of West Virginia or Virginia in order to see our daughter alive. All five victims were taken to Greenbrier Valley Medical Center. Nicole was later transferred to Carilion Roanoke Memorial Hospital where she was pronounced dead. The driver had a quick hearing, without our notification. He pleaded NO CONTEST and received a $25.00 fine. I have been enraged with the laws and criminal system since that day.

What is Drowsy Driving?

Sleepiness and driving is a dangerous combination. Most people are aware of the dangers of drinking and driving but don't realize that drowsy driving can be just as fatal. Like alcohol, sleepiness slows reaction time, decreases awareness, impairs judgment and increases your risk of crashing.

It's nearly impossible to determine with certainty the cause of a fatal crash where drowsy driving is suspected. However, there are a number of clues at a crash scene that tell investigators that the person fell asleep at the wheel.

For example, drowsy driving accidents usually involve only one vehicle where the driver is alone and the injuries tend to be serious or fatal. Also, skid marks or evidence of other evasive maneuvers are usually absent from the drowsy driving crash scene.

Unlike alcohol-related crashes, no blood, breath, or other objective test for sleepiness behind the wheel currently exists that investigators could give to a driver at the scene of a crash. This makes police training in identifying drowsiness as a crash factor very difficult.

Definitions of drowsy driving or driver fatigue rely on how the concept of "fatigue" is defined. Fatigue is a general term commonly used to describe the experience of being "sleepy," "tired," "drowsy," or "exhausted." While all of these terms have different meanings in research and clinical settings, they tend to be used interchangeably in the traffic safety and transportation fields.

There are many underlying causes of sleepiness, fatigue and drowsy driving. Including sleep loss from restriction or too little sleep, interruption or fragmented sleep; chronic sleep debt; circadian factors associated with driving patterns or work schedules; undiagnosed or untreated sleep disorders; time spent on a task; the use of sedating medications; and the consumption of alcohol when already tired. These factors have cumulative effects and a combination of any of these can greatly increase one's risk for a fatigue-related crash.

Sleepiness or Fatigue Causes the Following:

- **Impaired reaction time, judgment and vision**
- **Problems with information processing and short-term memory**
- **Decreased performance, vigilance and motivation**
- **Increased moodiness and aggressive behaviors**

In addition to the dangers of driving under the influence of fatigue, several states are considering legislation that would allow police to charge drowsy drivers with criminal negligence if they injure or kill someone while driving if they have not had adequate sleep.

Warning Signs

Your eyelids droop and your head starts to nod. Yawning becomes almost constant and your vision seems blurry. You blink hard, focus your eyes and suddenly realize that you've veered onto the shoulder or into oncoming traffic for a moment and quickly straighten the wheel. This time you were lucky; next time you could become the latest victim of the tragedy of drowsy driving.

According to the National Sleep Foundation's Sleep in America poll, 60% of Americans have driven while feeling sleepy and 37% admit to actually having fallen asleep at the wheel in the past year.

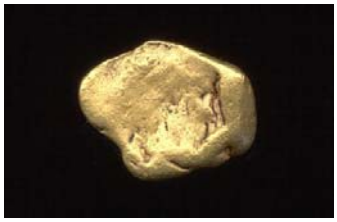
However, many people cannot tell if or when they are about to fall asleep. And if sleepiness comes on while driving, many say to themselves, "I can handle this, I'll be fine." Yet they're putting themselves and others in danger. What they really need is a nap or a good night's sleep.

Here are some signs that should tell a driver to stop and rest:

- **Difficulty focusing, frequent blinking, or heavy eyelids**
  *** Daydreaming; wandering/disconnected thoughts**
  *** Trouble remembering the last few miles driven; missing exits or traffic signs**
  *** Yawning repeatedly or rubbing your eyes**
  *** Trouble keeping your head up**
  *** Drifting from your lane, tailgating, or hitting a shoulder rumble strip**
  *** Feeling restless and irritable**

Midnight Shift Nugget

Achieving Good-Quality Daytime Sleep



Working nights can make getting long periods of good daytime sleep a real challenge. But it's important to know that good sleep doesn't just happen for most shiftworkers. Instead it requires developing a game plan that will give you the best chance of getting the shut eye you need and deserve.

Why is getting good sleep during the day harder then at night?

There are many reasons of course, but the main one falls back on our ancestors and the evolution of the biological clock. For thousands of years, our ancestors work up with the sun and slept in the dark. As animals with poor night vision, and a weak sense of smell and hearing, it was much safer for humans to hide and sleep at nights. Consequently this pattern developed a natural human circadian rhythm, where we get tired in the evening after the sun sets and are alert during the daytime. When we try to change this pattern, such as sleeping during the day, it takes time for our bodies to adjust.

So what can you do to maximize your chances of getting good daytime sleep?

Step One: Experienced daytime sleeper know that the battle for good sleep begins before you're in your pajamas. Here are a few things you want to do before getting ready to go to bed:

Avoid caffeine. Caffeine can stay active in your body and affect your ability to sleep for at least 4 hours. So if you know you go to bed around 9 a.m. when you're working nights, try not to drink any caffeine after 5 a.m.

Also be aware of substances that negatively affect sleep like alcohol and nicotine.

Avoid sunlight before sleep. Bright sunlight in the morning before bed can jump start your biological clock into thinking that it's time to wake up. Try wearing dark sunglasses during your drive home in the morning.

Eat well. Instead of having bacon or another high-fat food for breakfast, try eating a light meal that is high in fiber and carbohydrates. For example, a bagel or a bowl of whole grain cereal will be easier on your stomach as you try to sleep.

Get regular exercise. While you don't want to exercise right before bed, getting regular exercise has been proven to help you fall asleep faster and help you sleep longer.

Communicate. Put the word out on the street, or at least to your family, friends, and neighbors that they should not disturb you in the morning when you're working the night shift. Remind them that during this time 11 a.m. is equivalent to 2 a.m. to you.

STEP TWO: A key part of achieving quality daytime sleep is to create the right sleep environment. The more you can create nighttime conditions and make 11 a.m. feel like 2 a.m., the more likely you will be able to fall asleep and stay asleep.

Create a dark environment. Use blackout curtains, aluminum foil or a second set of drapes to ensure that sunlight does not come through the windows. Keep doors closed to prevent light seeping in from the rest of the house. The darker your bedroom is the more it will feel it is the night.

Noise control. Disconnect the phone in your bedroom, turn on a fan and leave the outside world behind you.

Get comfortable. Keep you bedroom at a comfortable temperature and make sure air circulates freely. Also, make sure you have a comfortable mattress, pillows and sheets. The more comfortable you are the more likely you are to sleep.

STEP THREE: It's always important to develop a routine that help theach the body when it is time to sleep.

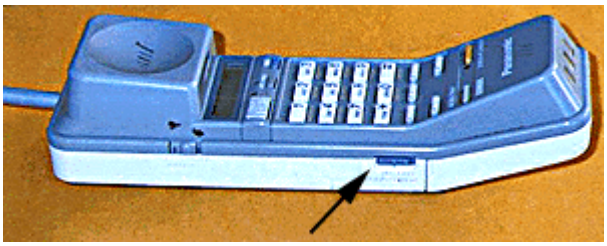
Develop a pre-sleep routine. **It is a good idea to develop a regular and relaxing routine before you go to bed. Maybe brush your teeth and read for a little bit.**

Keep a regular sleep schedule. **The more you can avoid sleeping at random times and develop some regularity with your sleep schedule, the better chance you have of getting good quality sleep.**

-

Bad Human Factors Design

The phone keeps disconnecting!



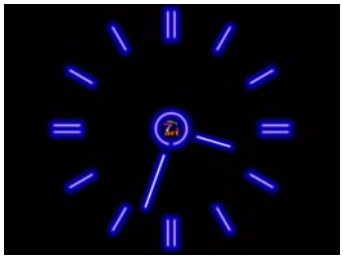
The phone rings. I answer. It's my future mother-in-law. We talk. She says, "Let me put Murray on." I wait. Click. The phone is disconnected! I get a call back in a minute. "Hi, Murray accidently hung up the phone."

Why did Murray accidently hang up the phone? Well, here is a picture of the phone. Notice the on-off switch on the side. (See arrow.) This switch is in a bad location because it is on the "handle" of the phone. As a result, the phone user accidently turns the phone off, which causes the phone to disconnect! This seems to happen frequently when handing the phone to someone, switching ears or repositioning the phone.

Design suggestion

One solution would be to move the switch away from the handle. If the purpose of locating the switch on the handle is to make it easy to turn the phone on or off with one hand, then recessing the switch below the surface of the phone would help avoid accidental switching.

FACT CHECK



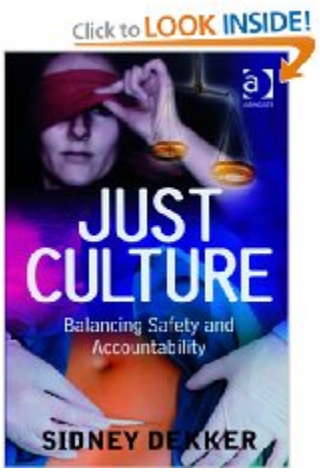
An average of 420 workers is injured on the job every hour.

Source: National Safety Council, “Injury Facts” 2008

jetBlue AIRWAYS

Just Culture: Balancing Safety and Accountability

A just culture protects people's honest mistakes from being seen as culpable. But what is an honest mistake, or rather, when is a mistake no longer honest? It is too simple to assert that there should be consequences for those who 'cross the line'. Lines don't just exist out there, ready to be crossed or obeyed. We-people-construct those lines; and we draw them differently all the time, depending on the language we use to describe the mistake, on hindsight, history, tradition, and a host of other factors.



What matters is not where the line goes-but who gets to draw it. If we leave that to chance, or to prosecutors, or fail to tell operators honestly about who may end up drawing the line, then a just culture may be very difficult to achieve. The absence of a just culture in an organization, in a country, in an industry, hurts both justice and safety.

Responses to incidents and accidents that are seen as unjust can impede safety investigations, promote fear rather than mindfulness in people who do safety-critical work, make organizations more bureaucratic rather than more careful, and cultivate professional secrecy, evasion, and self-protection.

A just culture is critical for the creation of a safety culture. Without reporting of failures and problems, without openness and information sharing, a safety culture cannot flourish.

Drawing on his experience with practitioners (in nursing, air traffic control and professional aviation) whose errors were turned into crimes, Dekker lays out a new view of just culture. This book will help you to create an environment where learning and accountability are fairly and constructively balanced.

http://www.amazon.com/dp/0754672670/ref=pe_606_10472760_pe_ar_t1

Picture This!

Okay class, repeat after us: “My car/pickup/motorcycle is NOT a moving van.” It seems as if, just about anywhere you look, you can find someone who’s convinced their personal vehicle can do the job of something a good deal bigger. Sometimes it’s the friend who wants to try to load a ton of gravel into his or her hatchback. Other times it’s people like this.