

2009: 2nd Quarter Smoke Event Summary

During the 2nd Quarter of 2009 commercial aviation saw a significant number of smoke events. By analyzing Service Difficulty Reports (SDR) from FAA-derived data, Part 121 and Part 135 carriers saw a total of 177 events of smoke. While these statistics are relevant to North America, and mostly the United States due to the reporting responsibilities, it shows that the problem of smoke/

fire/fumes is a significant risk in commercial aviation. The data was taken for the time period of April 2009 to June 2009. Over this rough 90 day span, there were 177 smoke events, which equates to approximately 2 per day.

Further analysis of the data allowed for a more in depth look at the reasons for the smoke events. Of the 177 smoke events, 91 of

these were direct incidents where smoke appeared in the cockpit. This equals approximately 1 per day during the 2nd Quarter 2009. During the same time frame there were 86 incidents of smoke in the cabin. Of all of these incidents, both of smoke in the cockpit and smoke in the cabin, 71 resulted in unscheduled landings and/or diversions. Therefore, commercial
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Mitigating Flight Crew Fatigue

Since the invention of the light bulb, our society has tried to squeeze more and more activity into the hours on the backside of the clock. In aviation, as in many other businesses, we have adjusted our schedules to respond to economic opportunity and competition until we have become dependent and largely accustomed to variable 24-hour schedules. Functioning through

periods normally reserved for restful sleep poses unique physiological challenges that can directly affect waking performance, productivity, and safety. Ignoring these factors can lead to a decrease in human capability and increase the potential for incidents and accidents. The following article will discuss vulnerabilities and mitigations that will reduce the risk of fatigue

affecting pilot performance.

Humans are hard-wired with a genetically determined biological need for sleep and with a circadian pacemaker that programs us to sleep at night and be awake during the day. Shift work, altered work schedules, crossing time zones, long hours of continuous wakefulness, and sleep loss can
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Upcoming Tradeshows

August 4-6, 2009
ALPA Air Safety Week: Washington, DC

October 20-22, 2009
NBAA: Orlando, FL



2009: 2nd Quarter Smoke Event Summary cont.

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aviation is reporting almost 1 unscheduled landings per day due to smoke. Of these 177 events, 20 resulted in an emergency descent to landing.

Smoke in the cockpit events were determined any time there was reference in the narrative portion of the SDR of smoke in any portion of the cockpit, including events where fumes were present. Many of the events where smoke was present in the cockpit also included smoke in the cabin. However, these events were only listed as smoke in the cockpit events.

Cabin smoke events were determined first, when there was no mention of smoke in the cockpit, and second, at any time when smoke was in any area of the cabin, including the lavatory and galley areas. Most galley incidents which caused smoke due to galley equipment were omitted when they did not involve a significant risk to flight safety.

Also omitted from this statistical analysis was any time the aircraft was operating on the ground. All of the 177 smoke events categorized occurred when the aircraft was in flight.

159 of the SDR events listed a portion of flight when the smoke event occurred. 54 of these were while the aircraft was operating in the takeoff/climb phase. The majority of these resulted in a return for landing at the airport of departure. Of the 159 events listing phase of flight, 79 occurred while the aircraft was in the en-

route, or cruise, phase. These 79 events resulted in over half diverting to an alternate airfield. The last category of phase was when the aircraft was in the descent, approach, or landing configuration. This category saw only 26 events of smoke.

Summing up the 2nd Quarter smoke data: In the period from April through June 2009, commercial aviation operating in Part 121 and Part 135 saw 177 smoke events (as voluntarily report to the FAA through the SDR program). Of these 177 smoke events, 91 occurred where smoke was present in the cockpit; 86 listed the presence of smoke in the cabin. Of these, 71 resulted in unscheduled landings and diversions. 20 resulted in an emergency descent to landing.

159 of the 177 events listed a phase of flight when the smoke occurred. 54 smoke events occurred during the takeoff/climb phase of flight, followed by 79 smoke events during the enroute/cruise phase. 26 events took place when the aircraft was in the descent/landing/approach phase.

What does this data mean?

Smoke/Fire/Fumes is a significant cause of in-flight diversions and unscheduled landings. Over two events of smoke occur daily in commercial aviation within North America.

SDR data originates from the Federal Aviation Administration (FAA) and is maintained by the Aviation Data Systems Branch, AFS-620, in

Oklahoma City, Oklahoma. The program provides the aviation community with a voluntary and electronic means to conveniently submit in-service reports of failures, malfunctions, or defects on aeronautical products. The objective of the Service Difficulty Program is to achieve prompt correction of conditions adversely affecting continued airworthiness of aeronautical products. To accomplish this, Mechanical Reliability Reports (MRRs), Malfunction or Defect Reports (M or Ds), or Service Difficulty Reports (SDRs) as they are commonly called, are collected, converted into a common SDR format, stored, and made available to the appropriate segments of the FAA, the aviation community, and the general public for review and analysis. →

For more information on Smoke/Fire/Fumes go to safeopsys.com and click on the link for Technical Reports.

The Royal Aeronautical Society Specialist Paper, "Smoke, Fire and Fumes in Transport Aircraft (SAFITA)," shows the risks and layers of mitigation of Smoke/Fire/Fumes (S/F/F) in transport aircraft and what can be done to improve safety and decrease risk. In addition to its significance, SAFITA has proposed a list of recommendations on how the industry can combat smoke.

Data analysis and statistics provided by Safety Operating Systems.



Mitigating Flight Crew Fatigue cont.

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create disruptions that degrade waking function. This may translate to fatigue, degraded vigilance and decision-making, and a wide range of subtle performance effects that can erode safety in operational environments. Understanding sleep is a start, and addressing the physiological factors that underlie fatigue can improve the safety margin and increase performance.

Sleep is a vital and complex physiological function. Fatigue is a signal from the brain that its need for sleep is not being met. When sufficiently deprived, the brain will trigger uncontrolled shifts from wakefulness to sleep, in order to meet its physiological need. The more fatigued the person is, the more rapid and frequent the intrusions of sleep into intended periods of wakefulness. Such episodes, called microsleeps, can last seconds or minutes. At the onset of sleep, an individual disengages perceptually, essentially ceasing to integrate outside information. A sleepy person's performance degrades before sleep intrusions begin, even with increased effort. Uncontrolled sleep episodes can occur while engaged with other persons during meetings, while standing, operating machinery, driving a car, or flying an airplane. Fatigue symptoms include forgetfulness, poor decision-making, slowed reaction, reduced vigilance, poor communication, fixation, apathy, lethargy, moodiness, and nodding off. It is essential that steps be taken to avoid fatigue during all flight operations.

Individual sleep requirements vary from six to ten hours nightly; although most adults need eight hours of sleep. Laboratory research has shown that the loss of two hours sleep in one night can substantially degrade performance during the next day, and the subsequent loss of sleep on consecutive nights would accumulate into a continuously increasing sleep debt. Therefore, sleeping late on the weekend might be a physiological response to an accumulated sleep debt, but deeper sleep may be needed to make up for accumulated sleep loss. Subjective sleepiness is a self-report of how sleepy an individual feels. A stimulating environment is a means of combating physiological sleepiness, but other adverse symptoms of sleepiness may remain.

The human circadian rhythm or schedule regulates physiological and behavioral functions, such as the sleep/wake cycle, body temperature regulation, hormone secretion, digestion, performance, and mood. Based upon established sleep patterns, it has daily performance peaks and troughs at specific times. Typically, body core temperature is lowest between 3:00 a.m. and 5:00 a.m. (local time, based upon specific time cues such as sunlight patterns and social activity), corresponding to the time when sleepiness is greatest and performance capabilities are lowest. Conflicting time cues, such as changing time zones or altering work or social schedules, can affect the circadian clock and reduce on-the-job alertness and performance.

Combating sleep loss and degraded performance requires multiple strategies to achieve needed sleep and to combat sleepiness when fatigued. Some effective measures are:

Minimizing sleep loss — Do not begin a new work schedule with an accumulated sleep debt. Use scheduled days off to catch up on lost sleep. Manage sleep on work and non-work days to avoid accumulation of sleep debt. Sleep more than once if necessary, and nap if possible. Don't force sleep — get up if unable to sleep within 15 to 30 minutes. Engage in other activities such as reading until sleepiness signals it is time to try again.

Naps — Getting some sleep is better than getting none. Limiting a nap to 45 minutes may be best immediately before reporting to work (avoiding the interruption of deep sleep that would occur with a longer nap). A two-hour nap will normally allow completion of one cycle through all of the states and stages of sleep. A nap is particularly valuable before night work that requires working through the circadian low point.

Good sleep habits — A regular pre-sleep routine can condition relaxation in preparation for falling asleep. Once established, these cues can be used anywhere and at any time. Examples include checking the security of the sleep environment, reading something relaxing or entertaining, or mental relaxation techniques such as meditation or yoga. Relaxation skills need to be practiced be-

Mitigating Flight Crew Fatigue cont.

fore they will provide consistent benefit.

🌀 **Food, alcohol, and exercise**

— If hungry at bedtime, a light snack may be beneficial; but avoid alcohol and caffeine, which have well-documented disruptive effects. A large meal before sleep is detrimental. Alcohol, in moderation, can promote relaxation, but it also produces easily disrupted, lighter sleep because it suppresses rapid eye movement (REM) in the first half of the night, leading to REM rebound and withdrawal effects in the second half of the sleep period. It is advisable to allow the blood alcohol level to return to zero before sleep. Caffeine stimulates the nervous system 15 to 45 minutes after ingestion and may remain active for 3 to 10 hours. Regardless of the level of habitual consumption, caffeine before sleep leads to lighter and reduced total sleep. Therefore, caffeine consumption should end at least three hours before attempting sleep. Strenuous exercise should not be conducted within six hours of sleep because it results in physiological activation, which may interfere with sleep. Regular exercise however, may enhance restorative deep sleep.

🌀 **Sleep environment** — A quiet, dark room is preferable. Eye-shades are a portable solution to providing needed darkness when on the road and when sleeping at an unaccustomed time. Continuous background noise (white noise) may help — for example, running a fan or playing a radio

between broadcast frequencies. Cooler temperatures are preferable to hot for restful sleep.

🌀 **Operational countermeasures**

for pilots — Active participation in conversation before and during flight (not just listening) helps to maintain mental alertness; inversely, lack of participation in conversation is a predictor of declining alertness. Physical exercise, such as stretching, isometrics, writing or chewing gum, may help a drowsy pilot to stay awake. Caffeine can be used strategically to maintain alertness. Such strategies should include avoiding caffeine during periods when alertness is already achieved, and the use of caffeine should begin about an hour before expected times of decreased alertness. Maintaining a balanced diet is also important, because gastrointestinal disorders can be disruptive to sleep. When work schedules make it difficult to have regular or balanced meals, it is important to plan ahead.

🌀 **Medication** — is not the answer. There is no substitute for real sleep. Most medications that induce sleep have performance-inhibiting side effects.

Fatigue expert, Dr. Mark Rosekind reports that 70 percent of pilots responding to his surveys said they had nodded off in the cockpit. In simulator research, many fatigued pilots reported they were fine when their performance indicated otherwise, prompting concern that fatigue-related inci-

dents are underreported. That is certainly the case at major airlines where pilots, perhaps out of concern that reports might lead to discipline or certificate action, are



Study finds 70% of pilots report nodding off in the cockpit.

reluctant to report fatigue-related events. There is every reason to suspect that fatigue events that do not result in damage or injury are also underreported. I ask that you consider how you have seen flight crew fatigue in action where you have worked. Do your crews nod off in the middle of a conversation, chronically complain about a seemingly onerous flight schedule or repetitive tasks? If your company is not addressing flight crew fatigue, concerns or symptoms, a personal discussion with your director of safety, or submission of a non-punitive event report to your system safety management office might help to get the issues addressed. →

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United Emergency in Bangor, ME

April 1, 2009

The crew of a United Airlines Boeing 767-300, registration N654UA performing flight UA-923 from London Heathrow, EN (UK) to Washington Dulles, DC (USA) with 178 passengers and 11 crew, declared emergency reporting smoke in the cockpit and diverted to Bangor, ME (USA). The airplane landed safely about 35 minutes later.

Emergency services found no trace of heat or fire, the cause of the smoke is being investigated. A replacement Boeing 757-200 registration N524UA has been flown in as flight UA-9928 and continued the flight with a delay of 6 hours.

Bangor Airport said, that the crew reported smoke in the cockpit and one engine inoperative.

Smoke Events

The next pages chronologically outline news stories of smoke events which occurred during the 2nd Quarter of 2009. Many are taken from news facilities worldwide and from aviation safety reporting networks. Daily Smoke Briefs are distributed by EVASWorldwide through email. To sign up for Daily Smoke Briefs, go to www.evasworldwide.com

Jet Blue, Smoke in the Cabin

April 14, 2009

The crew of a Jetblue Embraer ERJ-190, flight B6-919 from New York JFK, NY to Chicago O'Hare, IL (USA) with 54 people on board, reported smoke in the cabin about 90 seconds after takeoff from runway 13R and requested to return to John F. Kennedy Airport. About three minutes later the crew reported, that the smoke started to dissipate, but there was

still haze in the mid cabin and it was still warm there. The airplane landed safely on runway 13L 16 minutes after takeoff.

Jet Blue Embraer 190



Cargo Smoke Alert

April 19, 2009

An Iberia Airbus A321-200, registration EC-HUI performing flight IB-878 from Madrid, SP to Fuerteventura, CI (Spain), was on approach to Fuerteventura, when a cargo hold smoke detector activated prompting the crew to declare emergency. The airplane landed safely, emergency services receiving the airplane found no fire or source of heat.

Learjet makes emergency landing in Louisville

April 5, 2009

No injuries are reported after a Learjet pilot reported smoke in the cockpit shortly after taking off from Louisville International Airport. The jet turned around and landed without incident. Emergency crews responded to the call around 5:00 Sunday evening and appeared to be using a thermal imaging camera to look for any hot spots. The jet was carrying a total of five people and had been bound for Northern Illinois.

Industry data suggests that in-flight fire remains the fourth leading cause of air carrier fatalities worldwide. On average in North America, there are three diversions due to smoke every day according to the FAA. It is estimated that over 100 smoke events occur worldwide per month. Smoke/Fire/Fumes is a subject the industry continues to combat.

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Emergency landing for Southwest

April 13, 2009

The McLennan Community College Dance Company had an unexpected stop in their trip back home from a dance competition Sunday.

Sunday at about noon, the MCC dancers boarded a Southwest airline flight out of Orlando, Fla, but the crew was forced to make an

emergency landing at the Tyndall Air Force Base in Panama City, Fla. Paige Allen, the dance company's captain and a sophomore from North Richland Hills, said and the others were told something may have exploded in someone's luggage causing smoke detectors to go off in the cargo hold of the plane.

While passengers waited for news of their next flight, the Air Force treated them to an Easter dinner at the Officer's Club on the base. Allen says they expected to leave Panama City at about 4:30 p.m. Sunday afternoon for Austin.

Smoke: EMB-135

April 24, 2009

A BMI British Midlands Embraer ERJ-135, registration G-CDFS performing flight BD-815 from London Heathrow, EN (UK) to Hannover (Germany) with 7 passengers, was on approach to Hannover, when the crew reported smoke in the cockpit about 7 minutes prior to estimated landing. The landing was accelerated, the airplane landed safely. All people on board disembarked without injuries.

German police reported, that a technical defect caused the smoke on board of the aircraft.

Smoke for Saudi Arabian Airlines

April 27, 2009

A Saudi Arabian Airlines Boeing 747-300, registration HZ-AIT performing flight SV-1061 from Riyadh to Jeddah (Saudi Arabia), was enroute, when a fire started in the internal wiring of the upper galley causing some smoke. Cabin and flight crew isolated the galley from electrical supply and stopped the fire. The airplane landed safely on runway 34C at Jeddah. Emergency services on stand by for the landing did not need to intervene.

April 29, 2009

A Saudi Arabian Airlines Embraer ERJ-170, registration HZ-AED performing flight SV-1925 from Wadi Ad Dawasir to Jeddah (Saudi Arabia) with 60 people on board, returned to Wadi Ad Dawasir when smoke originating from the air conditioning system entered the cabin shortly after takeoff. The airplane landed safely on runway 28. The airplane taxied to the gate, passengers disembarked normally.

Boeing 747: Smoke in the Cockpit and Struck by Lightning

April 12, 2009

The crew of a Virgin Atlantic Boeing 747-400, registration G-VFAB performing flight VS-6 (dep. Apr 11th) from Miami, FL (USA) to London Heathrow, EN (UK) with 363 people on board, reported smoke in the cockpit while enroute at FL380 at around N39 W59 about 410nm southsoutheast of Halifax and requested to divert to Halifax, NS (Canada). The airplane was cleared to Halifax and landed safely on runway 14 80 minutes later.

NAV Canada reported on April 14th, that the crew declared emergency because of smoke in the cockpit. While approaching Halifax, about 5nm southwest of the airport, the airplane was struck by a lightning. The airplane landed safely.

■ Cargo Hold Smoke Alert

May 2, 2009

Jet Airways London-bound flight carrying 262 and 15 crew passengers from here landed in emergency conditions in Baku, the capital of Central Asian country of Azerbaijan, today following a smoke warning in the cargo-hold, nearly four hours after it took off.

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Cabin Smoke: Air France

May 6, 2009

A Cityjet Avro RJ-85 on behalf of Air France, registration EI-RJT performing flight WX-5082/AF-5082 from Paris Charles de Gaulle (France) to Shannon (Ireland) with 24 passengers and 4 crew, initiated an emergency descent from FL340 to FL110 just before the English coast overhead the British Channel reaching FL110 within 5 minutes and 27nm. The airplane subsequently diverted to London Gatwick, EN (UK) for a safe landing.

Cityjet reported, that there was smoke in the cabin prompting the diversion.

Allegiant Air Cockpit Smoke

May 19, 2009

An Allegiant Air jet carrying 135 passengers and crew made an emergency landing in Las Vegas after the crew reported smoke in the cockpit.

Officials said Flight 394 from Los Angeles to Grand Junction, Colo., was diverted and touched down at McCarran International Airport without incident. The MD-83 aircraft taxied to a gate and no injuries were reported.

Airline spokeswoman Tyri Squyres said the 130 passengers would continue to Grand Junction on a different plane, arriving after 6 p.m.

American Airlines emergency diversion in Halifax, NS

June 9, 2009

An American Airlines Boeing 767-300, registration N357AA performing flight AA-64 from New York JFK, NY (USA) to Zurich (Switzerland) with 194 passengers and 12 crew, diverted to Halifax, NS (Canada) when smoke appeared in the mid cabin about 280nm southwest of Halifax about 45 minutes into the flight. The crew turned towards Halifax and performed

an emergency descent to 10,000 feet. A flight attendant put on a personal oxygen mask, entered the lavatory and managed to extinguish the fire. The airplane landed safely on Halifax's runway 05 35 minutes after the smoke appeared and exited the runway. The passengers disembarked normally via air stairs brought to the aircraft. One passenger suffering from anxiety was brought to a hospital.

Engineers determined, that a fan in the ceiling of the mid cabin lavatory had overheated and caught fire.



Smoke in the Cabin, Flight diverted

May 12, 2009

An Airlinair Aerospatiale ATR-42-300, registration F-GKYN performing flight A5-242 from Agen to Paris Orly (France) with 30 passengers, returned to Agen when a strong burning smell developed in the cabin about 15 minutes into the flight followed by visible smoke out of the air conditioning system shortly thereafter. The crew managed a safe landing about 30 minutes after departure, no injuries occurred.

British Airways diversion

May 12, 2009

A British Airways Boeing 767-300, registration G-BZHC performing flight BA-676 from London Heathrow, EN (UK) to Istanbul Ataturk (Turkey), was enroute near Budapest, when cabin crew observed smoke in the cabin. The flight crew declared emergency and diverted to Budapest for a safe landing.

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United Airlines: Diversion

May 15, 2009

The crew of a United Airlines Boeing 757-200, registration N535UA performing flight UA-189 from Baltimore, MD to Chicago O'Hare, IL (USA) with 140 passengers, declared emergency reporting smoke in the cockpit and diverted to Indianapolis, IN. The airplane made a safe visual landing on runway 23R about 25 minutes later. The smoke dissipated after landing, the passengers disembarked normally.

Emergency services could not establish a source of fire or heat.

Smoke gets in the Eyes

May 20, 2009

An Austral Aerolineas Argentinas McDonnell Douglas MD-83, registration LV-BDO performing flight AU-2485 from Tucuman, TU to Buenos Aires, BA (Argentina), had just touched down in Buenos Aires, when smell of burning plastics were noticed in the cabin. While the airplane taxied to the gate, thick smoke entered the cabin appearing to come from the air conditioning vents. The airplane was stopped and evacuated onto the taxiway. No injuries have been reported.

Passengers reported, that the smoke affected respiration and eyes.

Airbus: Cockpit Smoke and Fire over Guam

June 11, 2009

A Jetstar Airbus A330-200, registration VH-EBF performing flight JQ-20 (departing June 10th) from Osaka Kansai (Japan) to Bilinga Gold Coast, QL (Australia) with 190 passengers and 13 crew, was about 4 hours into the flight at 01:38am local (15:38Z Jun 10th), when the flight crew noticed smoke coming from the right hand side of the cockpit and donned their oxygen masks.

Moments later the heating of the right hand cockpit window caught fire. The captain managed to put out the flames using a fire extinguisher. The crew declared emergency and decided to divert to Guam (Guam), where the airplane landed safely at 02:13am local (16:13Z Jun 10th) and taxied to a gate. No injuries occurred.

Attending fire services confirmed the presence of smoke in the

cockpit, but were able to terminate the emergency a few minutes after all passengers and crew had disembarked normally.

Jetstar Airbus A330



Emergency landing in Iowa

June 2, 2009

A spokeswoman says a Northwest Airlines plane has made an emergency landing in Iowa after crew members smelled smoke during a flight from Detroit to Los Angeles.

Northwest spokeswoman Susan Elliott says Flight 335 landed without incident at the Waterloo Regional Airport around midmorning Tuesday, about an hour into its flight.

Elliott said there were 182 passengers and a crew of eight on board. No one was injured. The flight crew diverted the aircraft to Waterloo as a precaution after reporting a "smoky odor" in the cabin.

Tuifly, smoke in the cabin

June 7, 2009

The crew of a Tuifly Boeing 737-800, registration D-AHLR performing flight X3-2637 from Menorca, SP (Spain) to Frankfurt/Main (Germany) with 189 passengers, declared emergency and decided to divert to Geneva (Switzerland) after smoke was observed on board of the airplane. The airplane landed safely on runway 23.

Northwest Airlines diverts to Shannon, Ireland

June 12, 2009

The crew of a Northwest Airlines Airbus A330-300, registration N811NW performing flight NW-821/DL-821 from Rome Fiumicino (Italy) to Atlanta, GA (USA) with 285 people on board, reported smoke in the cabin about 10 minutes after passing south of the southwest corner of Ireland at FL360, declared emergency and diverted to Shannon, where the airplane landed safely

on runway 06 30 minutes later. Attending fire services sprayed the right hand main gear after landing.

The remainder of the flight showed cancelled for some time, the airplane however is now being prepared for departure following thorough checks.

Shannon Airport reported, that there was a smokey odour in the

forward galley prompting the diversion. The passengers disembarked normally at the gate.



Embraer: Smoke in Cockpit

June 4, 2009

The crew of a Shuttle American Embraer ERJ-170 on behalf of United Airlines, flight S5-7559/UA-7559 from Pittsburgh, PA to Denver, CO (USA) with 67 passengers and 4 crew, declared emergency reporting smoke in the cockpit and problems with electrical systems while enroute at FL360 about 35nm east of Moline, IL. The crew decided to divert to Moline's Quad City Airport, where the airplane landed safely on runway 09 just 12 minutes later. The airplane stopped on the runway, passengers disembarked via stairs brought to the runway and were bussed to the terminal.

Smokey Odor!

June 17, 2009

A Chautauqua Airlines Embraer ERJ-145, registration N292SK performing flight RP-7860 from Washington, DC (USA) to Toronto Pearson, ON (Canada) with 53 people on board, was on final approach to Toronto's runway 06L about 8nm before touchdown, when the crew declared emergency reporting a smokey odor in the cockpit. The crew continued the approach for a safe landing and taxied to the gate. The Canadian TSB reported, that the #1 windshield heat system was the source of the smell of smoke.

Northwest returns to Gate: Smoke in the Cockpit

June 8, 2009

There were some tense moments for airline passengers as smoke was spotted coming from the cockpit moments before take off at the Flint Bishop International Airport. Flint Bishop Airport officials told NBC25 around 8:30 p.m. Monday night a Northwest airplane that was about to leave for Detroit had to turn back around on the runway because a crew member noticed smoke coming from the cockpit. The pilots were able to taxi the plane back to the gate and all 48 passengers got off the plane safely. We're told the plane stopped smoking as soon as the engines were turned off. The airport fire department and Northwest airlines are investigating the incident.

Visible smoke over Maine

June 27, 2009

A Scandinavian Airlines Airbus A330-300, registration LN-RKH performing flight SK-910 from Newark, NJ (USA) to Copenhagen (Denmark), diverted to Bangor, ME (USA) after smoke became visible in the cabin about 50 minutes into the flight and a source of the smoke could not be determined by the flight attendants. The airplane landed safely on Bangor's runway 15 about 20 minutes later.

Smoke over Germany

June 29, 2009

The crew of an Air Berlin Boeing 737-800, registration D-ABBG performing flight AB-2740 from Dusseldorf (Germany) to Heraklion (Greece) with 181 passengers, reported smoke in the cockpit and decided to return to Dusseldorf, where the airplane landed safely shortly after takeoff. A replacement Boeing 737-800 registration D-ABBM reached Heraklion with a delay of 5.5 hours. The airline reported, that there was no fire on board, some light haze smelling of oil was visible and an oil indication illuminated.

Smoke in the Galley

June 26, 2009

A Southwest Airlines flight from Florida to Philadelphia was forced to land in Baltimore last night because of smoke in the cabin, an airline spokesman said. No one was hurt, and the 125 passengers were transferred to another plane and were expected to land in Philadelphia International Airport around midnight, according to Southwest Airlines spokesman Paul Flanigan. Flight 3858 originated out of Fort Lauderdale and was headed straight to Philadelphia when crew members and some passengers noticed smoke in the aft galley of the Boeing 737, Flanigan said. The plane was diverted to BWI. A short-circuited coffeemaker is believed the culprit.

Return to the Gate: Smoke in the Cockpit

June 30, 2009

A flight from Salt Lake City International Airport to Chicago never made it off the ground Tuesday morning. As United Airlines Flight 6184 backed out to head to the airport's taxiway, the pilot smelled smoke in the cockpit. He reported the problem and returned to the gate. The plane's 60 passengers and six crew members were evacuated.



Acrid Smoke on Spirit Airbus

June 30, 2009

A Spirit Airlines Airbus A319-100, registration N524NK performing flight NK-433 from Chicago O'Hare, IL to Fort Lauderdale, FL (USA) with 143 people on board, was enroute at FL380, when a flight attendant detected a burning acrid smell on board. The crew decided to divert to Daytona Beach. In the meantime passengers in the first 10 rows started to cough. The airplane landed safely in Daytona Beach 15 minutes later. The passengers disembarked normally. Three passengers complaining about shortness of breath and burning eyes were taken to a hospital on stretchers. The smoke dissipated once the engines were shut down.

Emergency Landing

June 28, 2009

A PIA Pakistan International Airlines Airbus A310-300, registration AP-BEG performing flight PK-363 from Quetta to Karachi (Pakistan) with 163 passengers, was climbing through about 7000 feet out of Quetta, when smoke started to fill the cabin. The crew declared emergency and returned to Quetta, where the airplane landed safely. The passengers disembarked normally via stairs, no injuries occurred. Officials reported, that the smoke originated in the air conditioning system.

Thomas Cook Air Return

June 27, 2009

The crew of a Thomas Cook Airlines Airbus A320-200, registration G-TCAD performing flight MT-559K from Manchester, EN (UK) to Larnaca (Cyprus) with 186 people on board, declared PAN reporting smoke in the rear of the cabin shortly after takeoff from Manchester and decided to return to Manchester. The airplane landed safely on runway 23R

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Curry powder triggers smoke Alert

June 15, 2009

An Air India passenger jet heading to Frankfurt was forced to return to Mumbai after a bag of curry powder set off smoke and fire alarms, it was reported on Saturday.

Pilots on the Boeing 747-400 plane activated fire extinguishers after receiving a cockpit warning about a fire in the cargo hold early on Friday morning, the Mumbai Mirror newspaper said.

But on the plane's return to India's financial and entertainment capital, engineers said the alert had been triggered by the escape of particles from a bag containing two to three kilogrammes (up to 6.6lbs) of curry powder.

The bag, belonging to a passenger from the western Indian state of Gujarat, was removed before the plane took off again after a 12-hour delay.

"On taking off for the second time,

the pilot apologised for the delay and announced that a bag containing curry powder had caused the problem," Air India spokesman Jitendra Bhargava was quoted as saying.

Mangoes and meat products that generate heat have been suspected of causing similar incidents on Air India flights in the past, the newspaper said.

The Terminator is Diverted due to Smoke

June 19, 2009

Gov. Arnold Schwarzenegger's plane made an emergency landing Friday evening because of smoke in the cockpit. The jet was about 10 minutes away from landing at the Santa Monica Airport when the pilot reported smoke coming from an instrument. The pilot made a "quick, steep, but safe landing" at 6:23 p.m. at Van Nuys Airport in the San Fernando Valley, McLear said.

City fire crews met the jet on the runway. There were no flames and no one was injured. Schwarzenegger tweeted about the incident, calling it "a little adventure," and posting a link to a photo of the jet parked on the runway on his Twitter feed. "All's ok, though," he tweeted. After landing, the governor exited the jet and headed to his Los Angeles-area home. A Federal Aviation Administration spokesman said a business jet re-

ported smoke in the cockpit and was diverted to Van Nuys Friday evening.

Schwarzenegger posts a photo on his Twitter feed after smoke in cockpit



Best Practices for Airfield Safety - Tips for Pilots

1. Encourage use of correct terminology and proper voice cadence.
 2. Eliminate distractions in the operational area.
 3. Obtain and use airport diagrams.
 4. Maintain a sterile cockpit when taxiing.
 5. Maintain appropriate Taxi speed.
 6. Encourage pilots to have their "eyes out" when taxiing.
 7. Encourage pilots to have a "heads up" policy when taxiing.
 8. Improve safety by teaching, advocating, stressing and understanding situational awareness.
 9. Customize RUNWAY SAFETY presentations for targeted audiences such as pilot organizations, safety seminars, airport authorities, etc.
 10. Realize that every airport is unique and presents its own set of RUNWAY SAFETY challenges.
 11. Stay alert; stay alive.
 12. Declare war on errors; make it everyone's responsibility.
- For more aviation safety tips, visit www.faa.gov



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Lighter behind fire on Japan Airlines flight

June 15, 2009

The Aviation Safety Council (ASC) said yesterday it had found a charred lighter in a Japan Airlines aircraft that caused a fire incident on Saturday. ASC said in a statement that the Japan Airlines Boeing 767-300 aircraft had two pilots, nine flight attendants and 33 passengers on board when it was preparing to land at 8:23pm on Saturday.

As the aircraft descended to 3,000m, however, a flight attendant detected a burning smell coming from the back of the cabin. The flight attendant then found smoke and a fire under seats 47A and 47C and quickly extinguished it. No injuries were reported.

Before the aircraft landed, the pilot notified the tower at Taiwan Taoyuan International Airport. The tower personnel then informed the local fire department, which dispatched 14 fire engines to

stand by at the airport.

ASC flight safety investigator Tracy Jen said the investigative team located a charred lighter in a gap between a seat and the back seat. "About one-third of the lighter remained after the incident and the Japanese characters on the lighter were still legible," Jen said. The team found burn marks on the front and back of seat 47C.



Photo shows burn marks found in a gap between the seat and the seat back on a Japan Airlines flight. At approximately 10,000 feet a flight attendant detected a burning smell in the back of the cabin.

Jen said passengers at seats 47A or 47C were a mother and son. Both had US passports. They told investigators they did not carry or use the lighter that might have caused the fire.

Jen said that although airlines once barred passengers from carrying lighters or other potentially dangerous items on board after the Sept. 11, 2001, terrorists attacks, they are now less strict in implementing the policy.

Aviation Safety Council said in its statement that the council had determined that the fire was a "flight safety incident."

The council has appointed a chief investigator to lead the probe. Results will be announced after the team completes its investigation, it said.

Boeing Statistical Summary, 2008 Now Available

The annual Boeing statistical summary of aviation accidents is now available for the year 2008. Outlined in the report are all large commercial aviation accidents for the year 2008.

Statistics are outlined by operation type, aircraft type, and damage/injuries. Additional information is given as to the nature of the events and as a chart for the previous 10 year time frame.

This information is a guide for all aviation safety professionals, as well as all aviators and operators.

The report can be downloaded from:
<http://www.boeing.com/news/techissues/pdf/statsum.pdf>

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