



Welcome to the 7th issue of the NATA Safety 1st® *Flitebag*, our quarterly online safety newsletter, supporting the NATA Safety 1st Management System (SMS) for Air Operators.

This quarterly newsletter will highlight known and emerging trends, environmental and geographical matters, as well as advances in operational efficiency and safety. Subsequent issues will include a section with a roundup of real-time incidents and events, along with lessons learned. Flight and ground safety have been enhanced and many accidents prevented because of shared experiences.



NICHOLAS A. SABATINI, ASSOCIATE ADMINISTRATOR FOR AVIATION SAFETY, REPORTS ON FAA SAFETY OVERSIGHT



Nick Sabatini spoke to the Committee on Transportation and Infrastructure, Subcommittee on Aviation, concerning the current state of Federal Aviation Administration (FAA) Safety Oversight. “My primary message to you today is that despite the tragic accident that took place in Lexington, Kentucky last month, the safety record of aviation in the United States (U.S.) is extraordinary. And while the Kentucky accident serves as an important reminder that our work as safety professionals is never done, we remain in the midst of the safest period in aviation history. Since 2001, U.S. scheduled air carriers have transported approximately 2.2 billion passengers, or seven times the population of our country. Over that time period we have had a total of seventy-eight passenger fatalities, said Sabatini.”

To continue to improve aviation safety we must use every tool at our disposal. The most effective way to improve safety is through Safety Management Systems (SMS). Safety Management Systems enable organizations to identify and manage risk far better than before. With this formalized approach, we can identify issues, fix them, and ensure they stay fixed.

Operating under a Safety Management System assures a disciplined and standardized approach to managing risk. The best part is we can review past experience and address known hazards, and at the same time we can look ahead and rigorously apply Safety Risk Management principles to any changes or introduction of new elements.

Furthermore, under an SMS, the whole process — identifying potential problems and putting corrections in place — is ongoing and the procedure is continuously assessed to make sure it is working.

In short, SMS formalizes risk management, which is imperative as we move from a forensic, or after-the-fact accident investigation approach, to a diagnostic and more prognostic, or predictive, approach. With the accident rate as low as it is, we must get in front of information, analyze trends, and anticipate problems if we are to continue to improve on an already remarkable record of achievement. Operating under a Safety Management System will allow airlines, manufacturers, and the FAA to do this better than before. So that we are all operating from the same approach, FAA must apply the same high standards to ourselves that we require of the entities that we regulate.

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We are no longer dealing with “common causes” of accidents. To meet tomorrow’s challenges, we need more data points and the analytical expertise to discern trends and identify precursors. And we need to share what we learn. We have an effort underway called the Aviation Safety Information Analysis System that begins to address this challenge by integrating multiple databases for a more comprehensive analysis. To keep the pressure on reducing the accident rate, we will need far more information about trends, about precursors, and about what is going on every day in the manufacturing and operating and maintenance environments.

[Complete testimony may be found here.](#)

NATA PROVIDES MEMBERS WITH HAZMAT TRAINING GUIDANCE

The Federal Aviation Administration (FAA) has amended hazardous materials (hazmat) training requirements for all Part 135 on-demand operators and many Part 145 repair stations. The amended regulations affect "will-carry" and "will-not-carry" Part 135 operators, as well as Part 145 repair stations providing services to those operators.



Many of NATA’s members are "will-not-carry" operators, and have requested assistance in drafting their new training program. Therefore, NATA has revised the most recent (2005) *FAA National Operations and Training Manual for the Non-Acceptance and Non-Transport of Dangerous Goods* to include the new requirements and reflect language currently being used by the FAA.

NATA members: [Review NATA’s regulatory report with links to the manual, an outline, and other resources.](#)

Not a NATA member? [Become a member.](#)

AIR CHARTER A VALUABLE TRAVEL OPTION

With Congress having passed rules restricting certain forms of air travel for Members of the U.S. House of Representatives and U.S. Senators on private aircraft, on-demand air charter travel will play a prominent role in the way Members of Congress conduct business with their constituents. Air charter can serve as a valuable means of transportation for Congressional officials as they travel around their district or state, as well as to and from Washington, DC. As the sole representative of the on-demand Part 135 air charter industry, NATA is eager to serve as a resource for Members of Congress and their staff who have questions about the use of charter aircraft.

Last year, NATA President James K. Coyne sent a letter to all 535 Members of Congress discussing the valuable services air charter operators provide, and the integral role the industry plays in our nation’s air transportation system. Employing over 40,000 people and operating over 11,000 aircraft, the on-demand charter industry generates approximately \$12.7 billion in revenues annually. A majority of charter operators are small businesses as well — ninety percent of all air charter operators own fewer than 10 aircraft and employ fewer than 25 employees.

Charter is also among the safest and most secure ways to fly. Charter operators whose aircraft weigh over 12,500 pounds participate in the "Twelve-Five Standard Security Program," a mandatory program certified by the Transportation Security Administration. NATA has also launched the NATA Safety 1st ® Safety Management System for Air Charter, which seeks to build a culture of safety in each participating company. Every day, the air charter industry seeks new ways to improve the safety and security of its operations.

[For more information on the benefits of air charter aircraft, download a copy of NATA’s publication *Chartering an Aircraft: A Consumer Guide to Help You Fly Smarter.*](#)



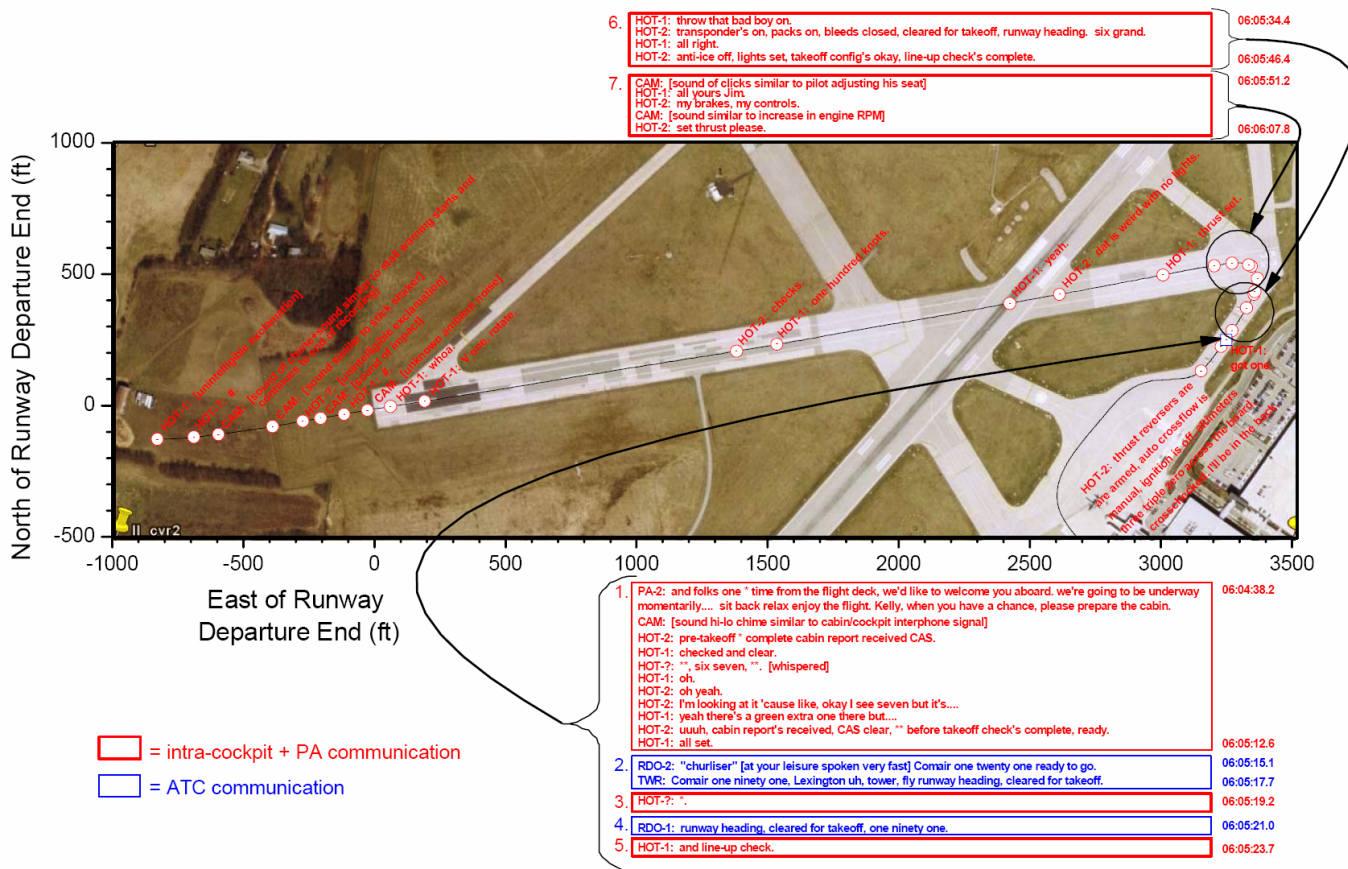
COMAIR FLIGHT 5191 COCKPIT ACTIVITY

Comair Flight 5191 was about a second away from the end of the runway when the plane achieved take-off speed, according to a new diagram released by federal investigators.

The graphic is a step-by-step overlay of the cockpit voice recorder and the air traffic control tapes as the plane taxied away from the terminal, attempted to take off from the wrong runway and crashed in a field next to Blue Grass Airport.

Flight 5191 crashed on Aug. 27, killing 49 of the 50 people aboard. The First Officer, James Polehinke, was the sole survivor.

Comair Flight 5191 August 27, 2006





NTSB IDENTIFICATION: CHI07LA063

14 CFR PART 91: GENERAL AVIATION

ACCIDENT OCCURRED FRIDAY, FEBRUARY 02, 2007 IN CAPE GIRARDEAU, MO

AIRCRAFT: RAYTHEON AIRCRAFT COMPANY B200

REGISTRATION: N777AJ

INJURIES: 2 UNINJURED.

This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has been completed.

On February 2, 2007, about 1030 Central Standard Time, a Raytheon Aircraft Company B200, N777AJ, sustained substantial damage during an uncontrolled descent and recovery from cruise at flight level 270. Visual meteorological conditions prevailed at the time of the accident. The flight crew reported that they depressurized the airplane after noticing cracking of the airplane windshield. They then donned their oxygen masks but were unable to obtain oxygen from the oxygen system resulting in their loss of consciousness. They later regained consciousness, recovered from the descent, and landed without further incident at Cape Girardeau Regional Airport, Cape Girardeau, Missouri. The 14 CFR Part 91 flight was operating on an instrument rules flight plan. The pilot and copilot were uninjured. The flight originated from Rogers Municipal Airport-Carter Field, Rogers, Arkansas, at 0939.

On-scene inspection of the airplane noted that approximately 2/3 of the left horizontal stabilizer and elevator were separated from the aircraft and 2/3 of the right elevator was separated but attached at the inboard hinge. The left and right wings were wrinkled. The left pilot windshield outer and inner ply was intact. The inner ply exhibited a shattered appearance with a crack at the lower right hand corner of the windshield. The cabin pressurization dump switch was in the dump position.

The oxygen system worked when it was functionally tested in accordance with Airplane Flight Manual.

NTSB: CREWS SHOULD CHECK RUNWAY HEADING BEFORE DEPARTURE

[Comair CRJ-100 crashed in August](#), killing 49 people, while trying to depart from the wrong runway at Lexington, KY. The sequence of events that resulted gave the entire pilot community pause to question policies and procedures. While most pilots say that checking the runway heading is part of their pre-takeoff check, many will admit, if they are honest, they don't always do it, and many checklists do not have this as a check item. The NTSB wants to change this, at least for airline crews. In [recommendations](#) issued, the NTSB asks the FAA to require all Part 121 operators to establish procedures for flight crews to positively confirm and cross-check the airplane's location before crossing the hold-short line for takeoff. The NTSB also wants those operators to provide specific guidance to pilots regarding the runway lighting requirements for takeoff operations at night.

INFORMATION FOR OPERATORS (INFO)

Each issue of the *NATA Safety 1st Flitebag* includes a review of the latest InFOs. [If you have not read previous issues, please review all InFOs by clicking here.](#)

An InFO contains valuable information for operators that should help them meet certain administrative, regulator or operational requirements with relatively low urgency or impact on safety. InFOs contain information or a combination of information and recommended action to be taken by the respective operators identified in each individual InFO.

InFO 07005, [Taxi into Position and Hold \(TIPH\)—Guidance for Pilots](#), announces important new ATC procedures and phraseology to improve runway safety and recommends pertinent safe practices for pilots. [Pilots are encouraged to download more detailed guidance on the FAA web site.](#)

InFO 07004, [New ETOPS Regulations](#), announces the publication of new regulations on Extended Operations (ETOPS) and explains some of the major revisions and additions to current ETOPS guidance. This InFO is only a brief overview of this significant rulemaking.

InFO 07003, [Emergency Locator Transmitter \(ELT\) Accessibility and Carriage](#), alerts operators that operate



aircraft equipped with ELTs that are required for extended over-water operations (14 CFR part 121, §121.339) that such ELTs will not meet the requirements for “readily accessible” removal and use, if contained within or attached for conjoined use with an emergency life raft after deployment.

InFO 07002, [Position Errors Using the High-Latitude VORTAC at Thule, Greenland](#), informs operators that position errors can result from the use of the THT VORTAC if it is used as an updating source for inertial navigation systems (INS) or long range navigation systems (LRNS).

InFO 07001, [Noise Attenuation Properties of Noise-Canceling Headsets](#), explains that users of noise-canceling headsets should evaluate available manufactured makes and models since performance and attenuation properties vary.

InFO 06005, [TCAS – Phantom TAs near U.S. Navy Vessels on Harbors](#), explains that the FAA has received reports of traffic advisories (TA) caused by active transponders aboard Navy vessels. The phantom TAs have occurred primarily during approaches to runway 27 at San Diego’s Lindbergh Field.

InFO 06004, [Maneuvers Away From Planned Track in Oceanic Airspace](#), reminds operators of the need for pilots to coordinate with the appropriate air traffic facility if a departure from a planned oceanic route is necessary. The FAA cites as a concern the ability to ensure that adequate aircraft separation is maintained when such maneuvers occur.

INCIDENT ROUNDUP

- ▶ Airbus A321 aircraft left wingtip was struck by the deicing boom. No injuries reported and aircraft taxied to the ramp without incident.
- ▶ Canadair CL-600 aircraft struck a fuel truck while pulling into the gate. No injuries were reported and damage was minor.
- ▶ A Boeing 737-800 diverted due to a fire in the cabin caused by a personal battery operated air purifier that caught the seat on fire. Four flight attendants and one passenger were transported to the hospital for smoke inhalation.
- ▶ A Learjet 24 crashed into a hilly area and burned. Both crewmembers were fatally injured. Weather was

unknown at the time of the report and no passengers were on board.

- ▶ A Challenger 600 rolled off the runway on landing. No injuries were reported and the weather was ¾ SM –SN W005.
- ▶ A Beechcraft Bonanza broke apart in the air killing the pilot and three passengers flying on a personal flight. The cause of the crash remains unknown and investigators were checking records on the airplane for any clues of mechanical problems and collecting weather radar data for the cold, rainy evening flight.

FLIGHT BYTES

Aviation Safety Reporting System (ASRS) Accepts Electronic Submissions

NASA has announced that pilots, air traffic controllers, flight attendants, mechanics, ground personnel and others involved in aviation operations can securely submit reports electronically to the Aviation Safety Reporting System (ASRS). Reports are submitted when they are involved in, or observe, an incident or situation in which aviation safety was compromised.

Previously, NASA required users to submit reports on paper, mailed to their offices in California. Online submissions should be made to the ASRS web site at http://asrs.arc.nasa.gov/forms_nf.htm.

An additional new feature allows users to search the ASRS database utilizing a web browser. Users may query the database using a wide variety of fields and then download search results. You may visit the ASRS database online at: <http://asrs.arc.nasa.gov/search.htm>.

Dulles and Bradley International Airports Approved As DCA Access Airport

The Transportation Security Administration (TSA) announced that Dulles International Airport (IAD) in the Washington, DC area and Bradley International Airport (BDL) in Windsor Locks, Connecticut, are now approved as gateway airports for flights departing to Ronald Reagan Washington National Airport (DCA). Signature Flight Support is currently the TSA-approved facility at both IAD and BDL.



The TSA requires that general aviation flights to DCA be in compliance with the DCA Access Standard Security Program (DASSP). One of the provisions of the DASSP is that all flights must be cleared through an approved portal airport.

TSA Names Hanscom Field DCA Gateway Airport

The Transportation Security Administration (TSA) has announced that Lawrence G. Hanscom Field (BED) in Bedford, Massachusetts, is now approved as a gateway airport for flights departing to Ronald Reagan Washington National Airport (DCA).

The TSA requires that general aviation flights to DCA be in compliance with the DCA Access Standard Security Program (DASSP). One of the provisions of the DASSP is that all flights must be cleared through an approved gateway airport.

FAA Mandates That Operators Designate Recipient For SAFOs/InFOs

The Federal Aviation Administration (FAA) recently announced a revision to Operations Specification (OpSpec) / Management Specification (MSpec) A007 that will require Part 135 operators and Part 91 subpart K fractional ownership program managers to designate a recipient for Safety Alerts for Operators (SAFOs) and Information for Operators (InFOs).

SAFOs contain important safety information, often of an urgent nature, and may include recommended but not required action. InFOs contain information for operators that is intended to help them meet administrative or regulatory requirements.

[View N8000.341 that describes the new requirement and provides samples of A007 templates](#)

AC Addresses Conversion Of Canadian Pilot Certificates

The Federal Aviation Administration (FAA) has issued advisory circular (AC) 61-35 to announce the establishment of new pilot licensing/certification conversion procedures for Canadian pilot license holders and U.S. pilot certificate holders. The conversion procedures are available to holders of FAA pilot certificates and Transport Canada Civil Aviation (TCCA) pilot licenses in the airplane category of aircraft at the private, commercial, and airline transport pilot (ATP) levels of licenses or certificates.

Pilots are not required to surrender the certificate or license from the original authority. Therefore, pilots may simultaneously hold an FAA pilot certificate and a TCCA pilot license and will need to meet the recency and operational requirements of both the FAA and TCCA to exercise the privileges of the license or certificate in each respective country.

[NATA members click here to read AC 61 – 135.](#)

New Excise Tax Rates In Effect

Excise tax increases for transportation occurring in 2007 are now in effect.

The rates for certain federal excise taxes (FET) and fees for commercial air transportation, including transportation provided by Part 135 on-demand operators, have increased.

Every year, certain FET rates are adjusted for inflation. The following rates are effective for transportation from January 1, 2007, to December 31, 2007.

- ▶ Domestic Segment Fee: \$3.40 per passenger
- ▶ International Facilities Fee: \$15.10 per passenger
- ▶ Flights To/From Alaska & Hawaii: \$7.50

Final NTSB Member Named

Before adjourning for the remainder of the 109th Congress, the United States Senate last month approved the nomination of Steven Chealander to fill the last remaining vacancy on the National Transportation Safety Board (NTSB). Chealander fills the vacancy created by the resignation of Ellen Engleman Connors, who resigned from the NTSB in May following the expiration of her term as Chair. Chealander has a distinguished career with American Airlines, serving most recently as manager of flight operations efficiency. Chealander has held numerous positions with the airline, including time in the cockpit as a captain. Prior to his tenure with American Airlines, Chealander served in the U.S. Air Force and as a military aide to President Ronald Reagan. Chealander's term expires on December 31, 2007.



NTSB Investigating Runway Incursion At KDEN -- Landing Airliner Executes Missed Approach

An apparent close call happened at Denver International Airport that had the National Transportation Safety Board heading to the scene to investigate a runway incursion involving two aircraft.

The NTSB stated at 7:28 am MST on January 5th, Frontier Airlines flight 297, an Airbus A319, broke out of low clouds as it was about to land on runway 35 left. The Frontier flight crew saw a Swearingen Metroliner, Key Lime Air flight 4216, which had inadvertently entered the runway.

The Frontier flight immediately executed a missed approach. It was estimated the aircraft came within 50 feet of each other.

The Airport Movement Area Safety System (AMASS) alerted the control tower personnel of the situation at the same time the Frontier crew saw the Metroliner on the runway. Weather at the time of the incident was one-half mile visibility, ceiling 600 feet overcast, snow and mist.

The Federal Aviation Administration will assist in the investigation.

Comair jet with cracked windshield lands at airport

A Comair regional jet that left the Greater Rochester International Airport on January 7th and returned to the ground shortly after take off because of a cracked windshield. Nobody aboard the plane was injured.

Comair stated, unlike car windshields, plane windshields have several layers of glass and that only one of those layers was cracked on the jet. Authorities believe the plane may have hit a bird. Authorities indicated an investigation would continue.

FAA Reacts To Energy Institute Fuel Filter Monitor Bulletin

In October 2006, the United Kingdom-based Energy Institute (EI) issued a warning on the use of aviation fuel filter monitors (fuses) qualified to IP 1583 4th edition or earlier editions. Aviation fuel filter monitors have been used for many years to prevent water and other contaminants from being delivered to aircraft during fueling operations. Evidence exists that water absorbing polymers from the fuel filter monitors may migrate downstream into aircraft fuel systems resulting in clogged aircraft fuel filters possibly triggering a filter bypass condition.

The Federal Aviation Administration (FAA) Flight Standards Service has revised the March 2006 Information Bulletin for Airworthiness (FSAW) addressing aviation fuel filter monitors with absorbent type elements and aviation fuel cleanliness in response to the Energy Institute's warning. The amended bulletin (FWAS 06-04A) includes the concerns raised by EI, a leading professional body for the energy industries.

The FAA bulletin provides information and guidance to Airworthiness Principal Inspectors (PI) for Part 121 and 135 air carriers operating turbine-engine powered aircraft.

NATA Comments On Airport SMS Draft Advisory Circular

NATA submitted comments to the Federal Aviation Administration (FAA) on a draft advisory circular (AC) that introduces safety management systems (SMS) for airport operators.

The draft AC introduces the FAA's concept of an SMS and provides direction for SMS development by airport operators. NATA applauded the FAA for its efforts in creating SMS standards for airport operators. However, NATA stated the draft AC needs to be redrafted and harmonized with other ongoing FAA SMS initiatives. AC 120-92, "Introduction to Safety Management Systems for Air Operators," contains SMS program principals that should be used in the FAA effort to standardize the guidance provided to the industry.

[View the draft AC.](#)

[View NATA's comments.](#)

Learn more about [NATA's Safety 1st Management System](#).

ETOPS Report Now Available

[NATA's Regulatory Report](#) on the newly published rule establishing requirements for extended operations (ETOPS) is available. The regulations apply to Part 135 operators conducting long-range flights.

The regulations impose planning, equipment, maintenance and training requirements on Part 135 flights operating beyond 180 minutes of an adequate airport. Any operators conducting flights that may be considered ETOPS are strongly encouraged to review the new regulations.



Airline Retirement Age

The Federal Aviation Administration (FAA) will propose a new rule that would change the retirement age for airline pilots to 65. Blakey spoke at the National Press Club in Washington, D.C., and reviewed the history of the age-60 rule. Blakey stated, "This is a change whose time has come. Issues of experience and equity clearly support change, as well as the need for "global harmonization" with international rules, which as of last November allow for one pilot on airline crews to be over 60. Safety will be enhanced by keeping experienced pilots in the cockpit," she said.

The new rule will only apply to pilots who have not reached 60 by the time the rule takes effect. The proposal faces possible opposition and could take years before it is put into place. The FAA indicated one of the two cockpit crewmembers on every flight would be under 60 years of age.

DOT Seeks Comments on Disclosures To Charter Customers

The U.S. Department of Transportation (DOT) published a notice seeking comments on the type, content and appropriateness of making certain operational disclosures to air charter customers.

The DOT is responding to a list of recommendations made by the National Transportation Safety Board (NTSB) related to the nature and timing of disclosures to air charter customers. The NTSB has asked the DOT to require charter operators to disclose a variety of information to customers including the names of any brokers involved in the transaction, the aircraft owner, and the ultimate air carrier if different from the entity with whom the customer initially contracted.

The DOT will consider responses to their request in their determination of what action, if any, will be taken. Possibilities include rulemaking or further interpretation of how existing regulations apply to air charter transactions.

NATA strongly encourages all interested parties to review and respond to the DOT notice. The association will submit comments to the DOT, and members are encouraged to share their views on the subject by contacting Director of Regulatory Affairs [Jacqueline Rosser](#).

The specific questions posed by the DOT are:

1. How might customers and passengers benefit from the information covered by the NTSB recommendation in making their air taxi service purchase decisions?
2. Should any notice requirement, if adopted, also apply to air charter brokers and other ticket agents who arrange for air transportation for customers using the services of on-demand air taxis?
3. To what extent is each of the notices recommended by the NTSB already provided in the normal course of business to persons who travel using an on-demand air taxi? If such notice is not currently routinely provided, what, if any, practical difficulties would the on-demand air taxi industry likely face in providing the notice?
4. What costs, if any, would the recommended changes impose on the industry? Would there be any paperwork burdens? Would there be a significant economic impact on a substantial number of small entities?
5. How might the disclosure of the names of the owners of the aircraft involved in the arranged flights be useful to customers and passengers? What, if any, practical or privacy concerns would be raised by such a requirement?
6. At what point in time must any notice, if required, first be provided to be effective, e.g., in printed and Website advertisements, to potential customers when they are seeking information – anytime prior to entering into a contract, upon signing the contract, or anytime prior to boarding the aircraft?
7. What form should any notice requirement, if adopted, take? That is, is verbal notice sufficient or must the notice be in writing?
8. What are the practical problems in requiring notice to individual passengers of an on-demand air taxi? Would any notice requirement be sufficient if provided to the person contracting for the flight, e.g., the customer's broker/agent or a corporation's travel department or an executive's assistant who arranged the flight?



Comment Period Extended For Flight Data Recorder Proposed Rule

The Federal Aviation Administration (FAA) has proposed to amend the flight data recorder (FDR) regulations by prohibiting the filtering of some original parameter sensor signals. This proposed rule is based on recommendations issued by the National Transportation Safety Board (NTSB), and is intended to improve the accuracy and quality of the data recorded on FDRs and used during accident and incident investigations.

The NPRM would affect all part 121, 125, and 135 aircraft equipped with a FDR. NATA is examining the economic impact such a rule would have on member companies. Affected members are encouraged to contact NATA Manager, Regulatory Affairs Lindsey McFarren with feedback and concerns.

The comment period has been extended to April 14, 2007.

Child Restraint Seats (CRS) Guidance

The FAA has released [AC 120-87A](#) to address the use of child restraint seats (CRS) on aircraft. This advisory circular will serve as a resource during the development, implementation and revision of aircraft operator procedures and programs regarding the use of CRS. It will assist aircraft operators subject to FAR Parts 91, 121, 125 and 135. The AC is part of several FAA initiatives designed to address safety concerns of the National Transportation Safety Board and to educate and inform aircraft operators, crewmembers and passengers regarding the use of CRS on aircraft in order to encourage and increase the use of approved CRS.

Mitsubishi MU-2

Special Federal Aviation Regulation (SFAR)

The new Mitsubishi MU-2 training program, approved by the FAA, is going to be the standard upon which MU-2 training is based. This program will provide a vehicle by which proficient pilots will retain their levels of proficiency and one that will bring those pilots that may be marginal up to a higher, standardized level of proficiency.

Additional training details:

<https://www.faasafety.gov/files/notices/2007/Jan/MU2.pdf>

Emergency AD for GE CF34s

An emergency airworthiness directive was issued February 16, 2007 for Bombardier Challenger 600-series aircraft with

General Electric CF34-3A1/-3B/-3B1 turbofans AD # [2007-04-51](#).

This emergency AD results from a report that a GE CF34-3B1 turbofan engine experienced an uncontained fan disk failure during flight operation. After landing the airplane, an inspection of the GE CF34-3B1 engine showed the front section of the engine failed, resulting in the fan, forward cowlings, and fan reverser departing from the engine. The airplane sustained minor fuselage damage. A subsequent inspection of the recovered segments of the fan disk, found an electrical arc-out defect at the fracture origin site. The fan disk was marked using the electro-chemical etch marking (ECM) procedure during engine assembly. If the ECM procedure is performed incorrectly, an arc-out defect can occur. This arc-out defect, caused during part marking, resulted in the uncontained failure. This condition, if not corrected, could result in an uncontained fan disk failure and airplane damage.

APHIS Again Delays Removal Of Exemption For Arrivals From Canada

Last year, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) amended user fee regulations with respect to flights entering the United States from Canada.

APHIS imposes user fees on certain international passenger and aircraft arrivals in the United States. Previously, passengers and aircraft arriving from Canada were exempt from those fees.

Beginning on June 1, 2007, commercial aircraft arriving in the United States from Canada will be required to pay the aircraft clearance fee. This fee is currently \$70.50. APHIS had previously intended to begin charging this fee on March 1, 2007.

Passengers arriving from Canada have been subject to the passenger clearance fee as of January 1, 2007. This fee is \$5.00 per passenger.

The user fees and the rates of those fees are not new. These are the current fees applicable to flights to the U.S. from other international locations for fiscal year 2007. The APHIS rule only removes the existing exemption for flights from Canada.

NATA members may click here to view NATA's Regulatory Report and learn more on these and other international user fees.



Analysis of Parts 61, 91, and 141 Proposed Changes Available to Members

The Federal Aviation Administration (FAA) recently published a notice of proposed rulemaking (NPRM) outlining revisions to Parts 61, 91 and 141. The proposed revisions focus mostly on flight training requirements, but are likely to affect all pilots.

NATA staff members have reviewed and analyzed the NPRM, considering the effects the proposals would have on its members. The association requests that affected parties review the report and contact [Lindsey McFarren](#) with additional concerns or feedback.

NATA members click here to review the Regulatory Report.

FAA ADDRESSING OPERATIONAL CONTROL CONCERNS RAISED BY NATA

A mid-February meeting with the Federal Aviation Administration (FAA) confirmed to NATA that changes to the agency's operational control guidance are pending. These changes should clarify the FAA's position on several areas of concern raised by NATA.



In two separate letters delivered to the FAA last month, NATA highlighted several issues within Notice 8000.347, which contains Operations Specification A008 and inspector guidance regarding operational control, and asked the FAA to remove, revise or clarify their meaning.

In particular, NATA was troubled by statements pertaining to the payment of pilots and the frequency with which so-called "owner's pilots" are used by an air carrier. [NATA members: Download NATA's letter to FAA Flight Standards Service Director James Ballough.](#)

[NATA members: Download NATA's letter to FAA Manager of Commuter, On-Demand and Training Center Hooper Harris.](#)

As a result of the meeting, NATA is confident that the FAA will address the issues raised by industry. Although a specific date for publication of the revised guidance was not

available, NATA believes it will be issued within the coming weeks.

Air charter operators having problems with how their inspector and local FAA office are interpreting the current Notice 8000.347 guidance with regard to the specific concerns raised by the association are urged to provide NATA with the details of the situation. Please send an email to [Jacqueline Rosser](#) with information including the certificate holder's name, inspector's name and FAA office with jurisdiction, and the specific issues of contention.

FAA HQ TO BLESS ALL PART 135 TURBINE-POWERED AIRPLANE REGISTRATIONS BEFORE BEING ADDED TO CERTIFICATE!

December 21, 2006

What's at Issue

In a notice to inspectors, the Federal Aviation Administration (FAA) implemented drastic changes to how certain airplanes are added to a Part 135 certificate holder's Operations Specifications (OpSpecs).

Effective December 18, 2006, the following actions require PRIOR approval from FAA Headquarters (HQ) staff:

Addition of *any* turbine-powered airplane to *any* Part 135 certificate.

Addition of *any air ambulance airplane* (turbine- or piston-powered) to any Part 135 certificate.

Discussion

The notice states that this action is necessary as a result of the FAA's review of operational control procedures by operators conducting or seeking to conduct operations under Part 135. The notice goes on to say, "Many air transportation operators may have franchised, leased, or otherwise rented their authority to conduct operations to noncertificated entities... Favored clientele of these certificate holders include, but are not limited to, air ambulance companies."

[FAA Notice N8000.343](#) became effective on December 18, 2006, and replaces N8000.336, which was originally released and became effective on December 5, 2006. N8000.336 has been cancelled.



The New Process

Prior to adding an affected airplane to the OpSpecs of a Part 135 air carrier, the Principal Inspector (PI) for the operator must send a communication to FAA HQ staff via a dedicated FAA Lotus Notes address providing the operator's name and the airplane's registration and serial number. An explicit approval from FAA HQ **must** be received before the PI can add the aircraft to the OpSpecs.

N8000.343 includes an exemption for newly manufactured airplanes delivered directly to the certificate holder. In this instance alone, the airplane may be added immediately to the certificate holder's OpSpecs without approval from the FAA.

NATA Recommendation

The FAA states that they expect to approve or deny requests to add an airplane **within two (2) business days**. Therefore, operators should immediately notify their PI if planning to add a turbine-powered and/or air ambulance airplane so the HQ approval process can be initiated. Early action to alert the PI to a new airplane is essential to avoid delays in adding aircraft.

NATA had made several recommendations to the FAA to ease the implementation of the notice, including a delayed effective date to "grandfather" aircraft that were already in the conformity/approval process. Unfortunately, the FAA did not accept all of the association's suggestions. Therefore, operators who were expecting to add aircraft in the very near term may now encounter delays.

Operators experiencing a delay of more than two business days are encouraged to contact NATA immediately.

Flight crews voiced concerns and want assurance they are receiving the correct amount of Prist when refueling at FBOs. NATA Safety 1st, with the assistance of industry experts, has begun an initiative to educate both flight crews and FBOs on additive delivery, handling and maintenance.

Air BP Aviation Services, Chevron Global Aviation, Gammon Technical Products and Hammonds formulated the following guidance for flight crews. The checklist that follows has been shared with NATA's Safety 1st Professional Line Service participants to better prepare for your concerns and questions.

CREW CHECKLIST FOR ADDITIVE (PRIST) DELIVERY

Verify – Prior to any fueling operation, PIC shall verify with Line Service that all standard and normal QC checks are completed and documented. PIC shall verify the required fuel grade and additive requirements; Jet-A; Jet-A with additive, etc.

Dry - Check that there is a desiccant dryer on the additive reservoir and that it is NOT completely pink. At a minimum, 50% should be blue. If, not, do NOT put additive into the aircraft with this injector. If humidity gets into the additive, it will not dissolve into the fuel and will attack the tank bottom instead.

Level - Make sure there is an adequate amount of additive in the additive tank. Make note of the current level in some way. A piece of tape makes a good marker or an O-Ring fit around the sight glass tube.

On - Make sure the additive system is turned on.

Flow - Make sure additive is flowing during refueling. Every additive system should have some form of flow indicator. This may be visual or by way of a digital display showing ppm concentration or, as applicable, a flashing light.

Level - After fueling, make sure the additive level in the additive tank has dropped. An estimate can often be made as to how much additive has been injected. The ration is 1 gallon per thousand gallons, or one quart per 250 gallons. One gallon of additive is 231 cu in. A quart is 58 cu in. (Note: Additive manufacturers may want to consider adding a decal to the side of the container calibrated in quarts.) Pilot may want to ask to see the calibration records for the unit.

Verify –When fueling is complete PIC shall verify with Line Service that they received the correct fuel grade and additive as required JetA; JetA with additive, etc.

Minimum Requirements of FBO Additive Handling (Oil Companies May Require Additional Requirements)

FBO should have **paperwork for daily sumping** of tanks and filter vessels

Desiccant dryers must be in proper operating condition (blue)

Paperwork shows reconciliation of **additive inventory** on a weekly basis

FBO can verify **proper operation of injector system**



B/2 TEST

Following these basic steps will not completely insure that you have the concentration of pure additive, but will greatly increase the chances that you do. To accurately verify the additive has dissolved into the fuel in the correct volume, you must use a HB B/2 kit. The HB B/2 test kit is a refractometer for evaluating an extraction of the fuel. It fits into a briefcase sized case and takes less than a half hour to run and is an accurate laboratory test method. All B/2 kits must meet ASTM D5006. .

You **cannot** take a sample from the nozzle or fuel system for the B/2 test, it must come from the aircraft fuel tank because most additive injectors put additive in - in little squirts. An averaging sampler can be used, where fuel is slowly taken from the flowing stream of fuel over several minutes.

THE BIGGEST MYTH IN AVIATION?

“Safety is *always* top priority.” You hear this slogan bandied about all the time and see it on those slick workplace posters, but could this expression really be the biggest myth in aviation? Let’s think about it for a moment. The very definition of the word priority requires that we evaluate competing alternatives. So, to say that safety is a priority means it will change based on the needs or urgencies of the moment, such as trying to please a demanding customer or the boss in order to meet a schedule.

Admitting we might not always put safety first doesn’t mean we deliberately intend to be *unsafe*. But if we don’t have a logical, orderly process written down for everyone to follow, coupled with a firm management commitment, safety can easily take a backseat to the bottom-line or the latest crisis *du jour*.

“Of course safety is first in our company,” you might be thinking. “We’ve never had an accident.” This is the traditional response to the “are we safe” question. While it’s definitely a point of pride, the lack of accidents isn’t the only metric by which to measure your company’s safety barometer.

Aviation has learned through the years that it’s cold comfort to go about fixing problems after a tragedy has occurred. And we have instead started to embrace a systematic approach to safety, or systems safety. The late Jerome F. Lederer (who

championed system safety in aviation and space flight) described system safety as, “Organizing to put your hindsight where your foresight should be in the identification and management of risks.”

With Lederer’s sage words in mind, listed below are 10 points to evaluate whether your company truly puts safety first.

1. Our company has a documented, comprehensive company-wide safety plan for identifying and managing risk that is distributed to all employees and is regularly updated.
2. Our CEO or other Accountable Executive takes responsibility for implementing the safety plan and ensuring its success.
3. Safety starts at the top in our company and is routinely emphasized as a core value.
4. Our company safety policy clearly states that any employee can report a safety issue without fear of retribution.
5. Our company safety policy is articulated in all company documents, such as, operations and maintenance manuals, employee handbook, standard operating procedures, etc.
6. Our employees are rewarded for “doing the right thing” where safety is concerned.
7. Our company has a Safety Manager who reports directly to the CEO or Accountable Executive.
8. Our Safety Manager is considered both as a resource and facilitator, not someone to blame when things go wrong.
9. Our company has a Safety Committee comprised of representatives from each department that meets on a regular basis to get out in front of safety issues and when special needs arise.
10. We routinely communicate safety issues and provide feedback on safety concerns to our employees.

So how did you fair? Were you able to confidently and positively confirm that all 10 areas are completely covered in your company? If not, conduct an honest assessment of your operation to determine where the gaps are. Develop an action plan and start the process to ensure you have a systematic approach to managing risk. It won’t happen over night. But with company commitment, it will be an evolutionary process. At some point you’ll be able to say, “Safety is *always* first in our company.”



NTSB IDENTIFICATION: OPS07IA001B

SCHEDULED 14 CFR PART 121:

AIR CARRIER OPERATION OF FRONTIER

INCIDENT OCCURRED FRIDAY, JANUARY 05, 2007

IN DENVER, CO

AIRCRAFT: AIRBUS INDUSTRIE A-319,

REGISTRATION: N915FR

INJURIES: 50 UNINJURED.

THIS IS PRELIMINARY INFORMATION, SUBJECT TO CHANGE, AND MAY CONTAIN ERRORS. ANY ERRORS IN THIS REPORT WILL BE CORRECTED WHEN THE FINAL REPORT HAS BEEN COMPLETED.

At 0728 MST (1428 UTC) a runway incursion occurred involving Key Lime Air (LYM) flight 4216, an SW4, and Frontier (FFT) flight 297, an A319, at Denver International Airport (DEN), Denver, Colorado.

At 0725:00, the DEN ground controller instructed LYM4216 to taxi to runway 34 via taxiways M and AA. According to the SW4 pilot, blowing snow reduced his visibility and taxiway SC was covered with snow that prevented him from seeing the centerline lighting. As he attempted to find the centerline lighting, he saw blue taxi lights, followed them and turned onto runway 35L.

According to the recorded airport surface detection equipment (ASDE), LYM4216 entered runway 35L at taxiway M2 at 0727:06.

At 0728:10, the ground controller asked the LYM4216 pilot his location. The pilot advised he was abeam Signature. Once the controller asked his location, the pilot stated that he noticed that he was on a runway.

The First Officer of FFT297 reported, "the Captain and I were flying back to Denver from St. Louis. The weather had deteriorated in Denver so we prepared to fly a full instrument approach. We were cleared to land on runway 35L by tower. I believe we broke out of the clouds around 600 feet. The visibility conditions were ½ mile with blowing snow. We both looked down the runway and confirmed verbally to each other that the runway was clear. We didn't see the aircraft until we were about 100 to 50 feet or so above the deck. When it did come into sight, it was at least 2,000 feet down the runway. The winds combined with the prop wash from the aircraft along with blowing snow is what caused it to be obscured and out of sight. I immediately commenced a go around as soon as the aircraft was in sight. The tower was given warning from its collision avoidance system not more than a couple of seconds later."

At 0728:17, AMASS provided a verbal and visual alert for an occupied runway and 4 seconds later, the tower controller instructed FFT297 to go around. The aircraft missed colliding by approximately 50 feet.

Weather at the time of the incident was 600 overcast, 1100 broken, visibility 1/2 mile, light snow, mist, wind 030 at 12, runway visual range on runway 35L was 5,500 feet.

SAFETY ALERT FOR OPERATORS (SAFOs) – MAINTAIN CURRENCY

Each issue of the *NATA Safety 1st Flitebag* includes a review of the latest SAFOs. [If you have not read previous issues, please review all SAFOs by clicking here.](#)

What is a SAFO?

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest.

In-Flight Fires Caused by Lithium Ion and Lithium Battery Failures

[SAFO 07002](#)

SUBJECT: In-Flight Fires Caused by Lithium Ion and Lithium Battery Failures

Purpose: This SAFO alerts operators of the potential for in-flight fires resulting from lithium ion and lithium battery failures caused by internal short-circuiting and rapid internal temperature rise.

Background: Since the original issuance of SAFO 05008 there have been several occurrences of smoke and fires erupting from failures of lithium-ion batteries such as those used within laptop computers. A more recent incident involving a lithium battery powered portable air purifier which caught fire resulting in injuries to several passengers and diversion of the flight. The NTSB is investigating this incident. Such batteries tend to electrically short and quickly overheat when rapid discharging or unregulated charging occurs. One prominent battery manufacturer, recently highlighted in the media, produces a "regulated" battery type



that has been subjected to recalls after several cases where battery failures caused fires. Other battery manufacturers, who produce “unregulated” batteries which provide higher capacity (such as those used in cameras, electronic games, medical equipment, flashlights, air purifying devices, etc.), are not necessarily aware of their vulnerabilities. Thus, the probability for such battery failures resulting from overheating caused by rapid discharging is higher with unregulated types in greater number of uses.

Discussion: On January 8, 2004 the FAA issued Advisory Circular (AC) 120-80, In-Flight Fires, which discusses the dangers of, and how to deal with, in-flight fires, particularly hidden fires that may not be visible or easily accessed by the crew. The AC emphasizes the importance of crewmembers taking immediate and aggressive action in response to signs of an in-flight fire while stressing the effectiveness of Halon extinguishing agents. In addition, the AC discusses the importance of appropriate crewmember training in dealing with hidden or other fires. Crewmembers should be aware that the potential for smoke emission and fire propagation from high-energy batteries, of any kind, can result from internal short-circuit failures.

Recommended Action: Directors of safety, directors of operations, chief pilots, training managers, and crewmembers of passenger-carrying airplanes under 14 Code of Federal Regulations (14 CFR) parts 91, 121, 125, 129, and 135 should be aware of the potential hazard described in this SAFO and should apply the practices of AC 120-80. Operators are reminded to follow their established procedures in contacting their local FAA Flight Standards District Office or their Certificate Management Office to report any incidents of in-flight fires occurring during its operations.

Advisory Circular 120-80, In-Flight Fires, may be found at:

[http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/ed51f1681e9d8c5e86256e4a00744607/\\$FILE/AC120-80.pdf](http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/ed51f1681e9d8c5e86256e4a00744607/$FILE/AC120-80.pdf)

VHF Navigation Antenna Failures

SAFO 07001

SUBJECT: VHF Navigation Antenna Failures

Purpose: This SAFO alerts operators of Agusta S.P.A. model A109 series helicopters of the potential for VHF navigation antenna failures causing reduction in usable range and sensitivity performance of very high frequency (VHF) omnidirectional range (VOR) and localizer (LOC) receivers.

Background: The FAA’s Flight Standards Service, Aircraft Maintenance Division has been tracking failure reports of Dorne & Margolin, model DMN48-1 caused by high temperatures which exceed the specified design limits for this model VHF navigation antenna. These high temperatures are derived from exhaust plume circulation which passes the antenna during main rotor rotation. Antenna failure may contribute to a reduction of localizer performance, which may have been a factor in a fatal accident in 2005. Antenna failure can occur randomly and without warning until VOR or LOC is selected for display on the course deviation indicator (CDI) or horizontal situation indicator (HSI), as equipped.

Discussion: As a result of such failures, several DMN48-1 VHF navigation antennas have been replaced by more than one operator, and both the antenna manufacturer, as well as the helicopter manufacturer has been notified of these failure conditions. Failures may include total loss of VOR and LOC navigation capability, or the degradation of navigation performance to that which is typical of operating outside a ground station’s service volume or usable area. Failures may go undetected during Global Positioning System (GPS) operations and may only be detected when the pilot selects the display of VOR or LOC navigation information.

Recommended Action: Directors of safety, directors of operations, chief pilots, fractional ownership program managers, training managers, and pilots operating the Agusta model A109 series helicopters equipped with the Dorne & Margolin, model DMN48-1 antenna are encouraged to closely monitor VOR or LOC performance during operations, and to discontinue operations predicated on VOR or LOC navigation upon observing any system anomaly or degradation. Additionally, affected operators authorized to conduct instrument flight rule (IFR) operations using GPS should consider limiting IFR operations to weather conditions which would allow continuation of flight to a safe landing in the event of loss of VOR or LOC navigation capability. Operators without authorization to use GPS in IFR operations should consider limiting their affected aircraft to visual flight rule (VFR) operations until the affected antenna is replaced with a type not subject to this potential failure.

Functional Test of the Helicopter Hydraulic System before Flight



[SAFO 06021](#)

SUBJECT: Functional Test of the Helicopter Hydraulic System before Flight.

PURPOSE: This SAFO emphasizes the importance of operators ensuring they have procedures and training for the functional test of the helicopter hydraulic system.

BACKGROUND: Accident investigations have revealed that some operators are not testing the helicopter hydraulic systems in accordance with the rotorcraft flight manual (RFM) or published and approved guidelines. Tests on the accident helicopters would have shown that the systems were malfunctioning or inoperative before flight.

DISCUSSION: Performing the functional test of the aircraft hydraulic systems in accordance with the RFM, or published and approved guidance, is required and essential to providing a complete preflight check of the system and essential to the safety of flight.

RECOMMENDED ACTION: All Directors of Operations and Chief Pilots should ensure that all training requirements for testing of aircraft hydraulic systems are emphasized during initial and recurrent training. All pilots of aircraft equipped with a hydraulic system should test the function of the hydraulic system, in accordance with the RFM/Published and approved guidance, as part of an accepted aircraft checklist.

Questions concerning this SAFO should be directed to the Commuter, On Demand, and Training Center Branch, AFS-250, at 202-267-8166.

NATA SAFETY 1ST MANAGEMENT SYSTEM (SMS) REPORTING – REMINDER TO ALL PARTICIPANTS

SMS participants report near miss events, incidents and accident information by email, fax or online to our third-party consultant, SH&E. SH&E reviews, sanitizes (removes identifying information) and then shares information as lessons for our participants. Shortened summations of these events are and will be shared in future *Flitebag* issues.

Please make sure to refer to your SMS guide on how to submit these reports. Thank you for your assistance.

FAA PUBLISHES GUIDANCE ON SIC TYPE RATING PROCEDURES

The Federal Aviation Administration (FAA) has published Notice 8000.351, which contains guidance to inspectors, pilots, and operators on procedures for obtaining a second-in-command (SIC) type rating. The Notice includes a sample SIC Temporary Airman Certificate, detailed instructions for completion of Form 8710-1 to obtain the SIC type rating, and answers to several frequently asked questions regarding the SIC type rating.

On August 4, 2005, the FAA issued regulations creating a SIC type rating and associated qualifications for pilots conducting international flight operations. The regulations became effective on September 6, 2005. Pilots conducting operations outside domestic U.S. airspace must obtain the appropriate SIC type rating no later than June 6, 2006.

The International Civil Aviation Organization (ICAO), of which the United States is a member, has regulations stating that pilots serving in the capacity of an SIC must possess an appropriate type rating. While FAA regulations actually exceed ICAO standards for SIC knowledge and training, the fact that a type rating was not issued had caused problems for pilots flying internationally in ICAO member states mandating that all required crewmembers demonstrate (via a type rating) qualification to serve on the aircraft. These concerns led to the FAA's creation of the SIC type rating.

NATA members may click here to view Notice 8000.351.

NTSB IDENTIFICATION: DEN07IA058
SCHEDULED 14 CFR PART 121: AIR CARRIER OPERATION OF UNITED AIR LINES, INC.
INCIDENT OCCURRED FRIDAY, FEBRUARY 02, 2007 IN DENVER, CO
AIRCRAFT: BOEING 737-522,
REGISTRATION: N928UA
INJURIES: 101 UNINJURED.

THIS IS PRELIMINARY INFORMATION, SUBJECT TO CHANGE, AND MAY CONTAIN ERRORS. ANY ERRORS IN THIS REPORT WILL BE CORRECTED WHEN THE FINAL REPORT HAS BEEN COMPLETED.

On February 2, 2007, at 1738 mountain standard time, a Boeing 737-522, N928UA, operated by United Air Lines, Inc., as flight 1193, and piloted by an airline transport



certificated pilot, nearly collided with a snowplow after landing at Denver International Airport, Denver (DEN), Colorado. Visual meteorological conditions prevailed at the time of the incident. The scheduled domestic passenger flight was being conducted under the provisions of Title 14 CFR Part 121, and an instrument flight rules (IFR) flight plan had been filed and activated. The captain, first officer, 3 flight attendants, and 96 passengers were not injured. The flight originated at Billings, Montana, approximately 1515.

Preliminary information indicates the snowplow was plowing snow on an Aircraft Rescue and Fire Fighting (ARFF) road and was en route to fire station no. 2. The driver stopped short of the taxiway. Without ATC or airport operations clearance, he crossed the runway. The driver said he saw the airplane as he was crossing the runway.

According to the Airport Operations Manager, the snowplow driver told the Operations Supervisor (Ops-9) who was escorting the snowplow, that he wanted to make a second pass over one road before proceeding to fire station no. 2, located north of runway 8-26. "Ops-9 acknowledged and then began driving west on taxiway R expecting to see the snowplow coming westbound on 98th street (south and parallel to taxiway R). After driving approximately 100 yards, Ops-9 began looking for, and finally saw, the snowplow on the north end of Great Rock Road at the edge of runway 8-26. Before Ops-9 could attempt radio contact, the plow driver ... drove onto runway 8-26 directly in front of United 1193 that had just landed."

The flight crew reportedly saw the snowplow holding short of the runway. They landed and during the rollout, they observed the snowplow cross in front of them. "Significant" reverse thrust and brakes were used to bring the aircraft to a halt on the runway.

The Air Traffic Control Tower reported that the Airport Movement Area Safety System (AMASS) was operational but no alarm sounded.

**FOR IMMEDIATE RELEASE:
January 9, 2007
SB-07-03**

NTSB DETERMINES PILOTS' POOR AIRMANSHIP CAUSED 2004 PINNACLE ACCIDENT IN JEFFERSON CITY, MISSOURI

Washington, DC -- The National Transportation Safety Board determined today that the probable cause of the October 14, 2004 accident of Pinnacle Airlines flight 3701 was the pilots' unprofessional behavior, deviation from standard operating procedures, and poor airmanship, which resulted in an in-flight emergency from which they were unable to recover, in part because of the pilots' inadequate training; the pilots' failure to prepare for an emergency landing in a timely manner, including communicating with air traffic controllers immediately after the emergency about the loss of both engines and the availability of landing sites; and the pilots' failure to achieve and maintain the target airspeed in the double engine failure checklist, which caused the engine cores to stop rotating and resulted in the core lock engine condition.

Contributing to the cause of this accident were the engine core lock condition, which prevented at least one engine from being restarted, and the airplane flight manuals that did not communicate to pilots the importance of maintaining a minimum airspeed to keep the engine cores rotating.

"This accident was caused by the pilots' inappropriate and unprofessional behavior," said NTSB Chairman Mark V. Rosenker. "Simply adhering to standard operating procedures and correctly implementing emergency procedures would have gone a long way to averting this tragic accident."

On October 14, 2004, a Bombardier CL-600-2B19 (N8396A) operated by Pinnacle Airlines (doing business as Northwest Airlink) departed Little Rock National Airport about 9:21 p.m. central daylight time en route to Minneapolis-St. Paul, Minnesota for a repositioning flight. The flight plan indicated that the planned cruise altitude was 33,000 feet. At about 9:26 p.m., the airplane was at an altitude of about 14,000 feet and the flight crew engaged the autopilot.

A few seconds later, the captain requested and received clearance to climb to the Commuter Regional Jet's maximum operating altitude of 41,000 feet. After the aircraft reached 41,000 feet, the airplane entered several stalls and shortly thereafter had double engine failure. The crew declared an emergency with the tower, informing them of an engine failure. However, they failed to inform the tower that both



engines had failed while they made several unsuccessful attempts to restart the engines. The crew also continued to try to restart the engines after the controller asked if they wanted to land.

The flight crew attempted to make an emergency landing at the Jefferson City, Missouri airport but crashed in a residential area about three miles south of the airport. The airplane was destroyed by impact forces and a post crash fire. The two crewmembers were fatally injured. There were no passengers on board and no injuries on the ground.

The Safety Board today issued eleven recommendations to the Federal Aviation Administration, as a result of this accident, dealing with pilots training and high altitude stall recovery techniques.

Also, as a part of its investigation into this accident, on November 20, 2006, the Safety Board issued seven safety recommendations dealing with the phenomenon of "core lock," including the following:

To the Federal Aviation Administration

1. For airplanes equipped with CF34-1 or CF34-3 engines, require manufacturers to perform high power, high altitude sudden engines shutdowns; determine the minimum airspeed required to maintain sufficient core rotation; and demonstrate that all methods of in-flight restart can be accomplished when the airspeed is maintained.
2. Ensure that airplane flight manuals of airplanes equipped with CF34-1 or CF34-3 engines clearly state the minimum airspeed required for core engine rotation and that, if this airspeed is not maintained after a high power, high altitude sudden engine shutdown, a loss of in-flight restart capability as a result of core lock may occur.
3. Require the operators of CRJ-100, -200, and 400 airplanes include in airplane flight manuals the significant performance penalties, such as loss of glide distance and increase descent rate, that can be incurred from maintaining the minimum airspeed required for core rotation and windmill restart attempts.

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

Media Contact: Terry N. Williams, williat@nts.gov (202) 314-6100

NTSB SYNOPSIS AAR-07/02 NATIONAL TRANSPORTATION SAFETY BOARD

PUBLIC MEETING OF JANUARY 23, 2007

(INFORMATION SUBJECT TO EDITING)

REPORT OF AVIATION ACCIDENT

CRASH DURING APPROACH TO LANDING

CIRCUIT CITY STORES, INC., CESSNA

CITATION 560, N500AT

PUEBLO, COLORADO,

FEBRUARY 16, 2005

NTSB/AAR-07/02

This is a synopsis from the Safety Board's report and does not include the Board's rationale for the conclusions, probable cause, and safety recommendations. Safety Board staff is currently making final revisions to the report from which the attached conclusions and safety recommendations have been extracted. The final report and pertinent safety recommendation letters will be distributed to recommendation recipients as soon as possible. The attached information is subject to further review and editing.

EXECUTIVE SUMMARY

On February 16, 2005, about 0913 mountain standard time, a Cessna Citation 560,

N500AT, operated by Martinair, Inc., for Circuit City Stores, Inc., crashed about 4 nautical miles east of Pueblo Memorial Airport, Pueblo, Colorado, while on an instrument landing system approach to runway 26R. The two pilots and six passengers on board were killed, and the airplane was destroyed by impact forces and post crash fire. The flight was operating under the provisions of 14 Code of Federal Regulations Part 91 on an instrument flight rules flight plan. Instrument meteorological conditions prevailed at the time of the accident.

The safety issues discussed in this report include inadequate training on operations in icing conditions, inadequate deice boot system operational guidance, the need for automatic deice boot systems, inadequate certification requirements for flight into icing conditions, and inadequate stall warning margins in icing conditions. Safety recommendations concerning these issues are addressed to the Federal Aviation Administration.

CONCLUSIONS

1. The captain and first officer were properly certificated and qualified under



2. Federal regulations. No evidence indicated any preexisting medical or physical condition that might have adversely affected the flight crew's performance during the accident flight. A review of the pilots' 72-hour histories revealed that they slept well in the days leading up to the accident flight and went to bed early in preparation for an early departure. No evidence was found that fatigue degraded the performance of either pilot on the day of the accident.
3. The weight and balance of the airplane were within landing limits.
4. The recovered components showed no evidence of preexisting powerplant, structural, or system failures.
5. The Pueblo Memorial Airport local controller did not provide the accident flight crew or the Denver Flight Service Station with the pilot report reporting light to moderate icing; however, this was not a factor in the accident because cockpit voice recorder information indicated that the flight crew was aware of the icing conditions.
6. During the approach, the flight crew of the sister ship, which was following the accident flight, cycled the deice boots numerous times and maintained a high airspeed and, subsequently, landed safely, indicating the importance of taking these actions to counteract the hazardous effects of icing.
7. The flight crew did not increase the landing reference airspeed while operating in icing conditions, contrary to company procedures and manufacturer guidance.
8. The airplane encountered supercooled liquid droplet (SLD) conditions, which are most conducive to the formation of thin, rough ice on or aft of the protected surfaces, during about the last 4 ½ minutes of the flight. Further, the airplane had residual ice on the wings after the deice boots were activated earlier in the flight, and this ice would have affected the overall thickness, roughness, and distribution of the SLD ice accumulation.
9. The flight crew did not activate the deice boots when configuring for the approach and landing, which was contrary to company procedures and manufacturer guidance.
10. The flight crew failed to maintain adequate airspeed during the final approach in icing conditions, which led to an aerodynamic stall from which they did not recover.
11. Pilots could benefit from the reinforcement during training of the Cessna Model 560 Citation V Airplane Flight Manual requirements to increase the airspeed and operate the deice boots during approaches when ice is present on the wings.
12. The briefing conducted late in the approach was a distraction that impeded the flight crew's ability to monitor and maintain airspeed and manage the deice system.
13. Ice bridging does not occur on modern airplanes; therefore, it is not a reason for pilots to delay activation of the deice boots.
14. Activating the deice boots as soon as an airplane enters icing conditions provides the greatest safety measure.
15. Manual operation of the deice boot system increases pilot workload, which can result in distraction during critical phases of flight such as approach and landing.
16. Existing flight test certification requirements for flight into icing conditions do not test the effects of thin, rough ice on or aft of an airplane's protected surfaces, which can cause severe aerodynamic penalties.
17. The Cessna 560 airplane's stall warning system did not provide a stall warning before the upset.
18. The Cessna 560 airplane's stall warning system does not provide a warning in all icing conditions, including those conditions in which thin, rough ice can accumulate on the protected surfaces.

PROBABLE CAUSE

The National Transportation Safety Board determines that the probable causes of this accident were the flight crew's failure to effectively monitor and maintain airspeed and comply with procedures for deice boot activation on the approach, which caused an aerodynamic stall from which they did not recover. Contributing to the accident was the FAA's failure to establish adequate certification requirements for flight into icing conditions, which led to the inadequate stall warning margin provided by the airplane's stall warning system.

SAFETY RECOMMENDATIONS

As a result of its investigation, the National Transportation Safety Board makes the following safety recommendations listed below. For more information about these recommendations, see the safety recommendation letters to the recipients.



To the Federal Aviation Administration:

1. Require that operational training in the Cessna 560 airplane emphasize the airplane flight manual requirements that pilots increase the airspeed and operate the deice boots during approaches when ice is present on the wings. (A-07-12)
2. Require that all training programs be modified to contain modules that teach and emphasize monitoring skills and workload management and include opportunities to practice and demonstrate proficiency in these areas. (A-07-13)
3. Require manufacturers and operators of pneumatic deice boot-equipped airplanes to revise the guidance contained in their manuals and training programs to emphasize that leading edge deice boots should be activated as soon as the airplane enters icing conditions. (A-07-14) (This safety recommendation supersedes Safety Recommendation A-98-91 and is classified "Open-Unacceptable Response.")
4. Require that all pneumatic deice boot-equipped airplanes certified to fly in known icing conditions have a mode incorporated in the deice boot system that will automatically continue to cycle the deice boots once the system has been activated. (A-07-15)
5. When the revised icing certification standards [recommended in Safety Recommendations A-96-54 and A-98-92] and criteria are complete, review the icing certification of pneumatic deice boot-equipped airplanes that are currently certificated for operation in icing conditions and perform additional testing and take action as required to ensure that these airplanes fulfill the requirements of the revised icing certification standards. (A-07-16) (This safety recommendation supersedes Safety Recommendation A-98-100 and is classified "Open-Unacceptable Response.")
6. Require modification of the Cessna 560 airplane's stall warning system to provide a stall warning margin that takes into account the size, type, and distribution of ice, including thin, rough ice on or aft of the protected surfaces. (A-07-17)

PREVIOUSLY ISSUED SAFETY RECOMMENDATIONS REITERATED IN THIS REPORT

Revise the icing criteria published in 14 Code of Federal Regulations Parts 23 and 25, in light of both recent research into aircraft ice accretion under varying conditions of liquid

water content, drop size distribution, and temperature, and recent developments in both the design and use of aircraft. Also, expand the Part 25 Appendix C icing certification envelope to include freezing drizzle/freezing rain and mixed water/ice crystal conditions, as necessary. (A-96-54)

Conduct additional research to identify realistic ice accumulations, to include intercycle and residual ice accumulations and ice accumulations on unprotected surfaces aft of the deicing boots, and to determine the effects and criticality of such ice accumulations; further, the information developed through such research should be incorporated into aircraft certification requirements and pilot training programs at all levels. (A-98-92)

1. For more information about this recommendation, see sections 1.18.2.1 and 2.3.
2. For more information about this recommendation, see sections 1.18.2.2 and 2.3.

ALPA CAUTIONS PILOTS ON ATC OPERATIONS IN BRAZILIAN AIRSPACE

On January 29, the Association issued ALPA Safety Alert 2007-01 to caution pilots about certain aspects of operating in Brazilian airspace. The September 2006 midair collision that occurred over Brazil has highlighted several issues associated with operations in that airspace that may have significant implications for the safety of flight.

ALPA believes that all pilots should maintain a high level of situational awareness while operating into or within the Brazilian Flight Identification Regions (FIRs). Of particular concern are both the procedural and technical ATC methods used in Brazilian airspace and its FIR boundary areas, compared to what pilots may be used to in other parts of the world.

ALPA therefore recommends that pilots

- ▶ Operating in and around Brazilian airspace ensure they are aware of all operational guidance published by their company and review company training materials if any have been provided.
- ▶ Always strictly adhere to ICAO standard phraseology for all communications and do not assume that the controller is fully aware of any changes that have been made to the flight plan.



- ▶ Consider using all available exterior aircraft lighting whenever changing altitudes.
- ▶ Who are familiar with operations in and around Brazil share that knowledge with their MEC Central Air Safety Committee and with ALPA's Engineering and Air Safety Department so that subsequent follow-up bulletins can be provided to ALPA members.
- ▶ Operating in this airspace, as is the case in all operations, work closely with their company safety and operations departments to ensure that all flight crews have the most comprehensive information available regarding the potential hazards of operating in this area.

While the ALPA bulletin focuses on issues related to the pilot/controller interface, pilots should note that the underlying deficiencies are caused by lack of proper governmental oversight and control of the ATC system. This is a separate issue that ALPA, in conjunction with IFALPA and other international agencies and entities, is working to correct.

Without commenting on the ongoing accident investigation regarding the recent midair collision, and based solely on reports from pilots who are experienced in operating in this environment, ALPA wishes to ensure that flight crews are aware of the following issues that may present operational challenges in Brazilian airspace:

- ▶ Although use of ATC surveillance radar is now widespread in Brazilian airspace, controllers' experience operating in a full radar environment is still developing. This may lead to subtle changes in procedures that reflect many years of using nonradar procedures.
- ▶ Controller experience is not always taken into account in scheduling ATC facility assignments for controllers. This situation could result in inexperienced controllers operating in a challenging environment with little or no supervision.
- ▶ Flight plan changes, including in-flight changes from original preflight flight plan, are not always properly transmitted through the entire ATC system. This can result in different ATC sectors having parts of two flight plans (original and revised). Therefore, if a change has been made to the original flight plan, the flight crew should make sure that a clearance for "flight planned route" has been clarified and specific routing details confirmed with each sector.
- ▶ As in many areas where English is not the controllers' primary language, controllers may speak limited

English. Pilots must also be aware that some controllers may sound proficient in the use of English as a result of these controllers either speaking with a familiar accent or because of their excellent pronunciation of certain words. In this situation, the actual proficiency of the controller's English skills could be masked, and this could exacerbate confusion generated by any flight plan changes. Therefore, strict adherence to ICAO standard phraseology is highly recommended.

- ▶ Pilots accustomed to more-efficient ATC systems in other operating areas may not realize the need to clarify instructions, avoid assumptions, or rely on the communications and situational awareness between pilots and controllers that may otherwise prevent errors. Similarly, a controller may not challenge pilots who inadvertently request an incorrect or inappropriate altitude, routing, etc.
- ▶ Brazil has no national or airport standards for engine-out departure procedures in terminal areas; thus each operator may have different procedures. Therefore, controllers may not know what procedure pilots are following in the event of an engine failure. Under these circumstances, high cockpit workload and language proficiency issues can add to the difficulty in effectively communicating the intended flight path to ATC.

One of the consequences of today's highly accurate navigation systems is that their precision can result in aircraft being on the same route with little or no lateral deviation. While the strategic lateral offset procedure (SLOP) that is in use in other areas of the world does not yet exist in South America, some member associations are actively debating the benefits of this concept and may soon put forth positions encouraging the use of this procedure. In the meantime, if individual flight crews choose to fly any deviations from a published airway, they should advise each ATC sector of their intentions.

Contact the ALPA Engineering and Air Safety Department at 1-800-424-2470 or eas@alpa.org for more information or to report safety issues. [Click here to go to ALPA's article.](#)



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Southern California Safety Institute

Website: <http://www.scsi-inc.com/>

The GW Aviation Institute Aviation Safety and Security Certificate Program

Website: http://www2.gwu.edu/~aviation/safetyandsecurity/ss_courses.html

Phone: 703/726-8334

Transportation Safety Institute

Website: <http://www.tsi.dot.gov/divisions/Aviation/aviation.htm>

University of Southern California Aviation Safety and Security Program

Website: http://viterbi.usc.edu/pdfs/unstructured/aviation/Course_Schedule.htm



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Yes, we want to sign up for the NATA SMS for Air Operators! We understand the following will be included in the price of our participation in the SMS:

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Pricing

The prices below reflect the total number of pilots that conduct operations for your business and/or your part 135 certificate. This number should include all your locations. Please note that we will correspond with one Safety Manager per company and will require additional company information once established in the program. Please check appropriate box below.

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Agreement

As an SMS Air Operators participant, we agree to implement a company safety program consistent with the principles and tenets of the NATA Safety 1st® Management System Guide, conduct recurrent pilot training that meets or exceeds FAA requirements and undergo a NATA SMS audit upon completion of our company manual.

Signed this date _____ CEO/Owner Signature _____

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