

Mexican Downgrade

The U.S. Federal Aviation Administration (FAA) has downgraded Mexico's aviation safety rating to Category 2, after determining that its civil aviation authority does not meet safety standards established by the International Civil Aviation Organization (ICAO).

The downgrade from FAA Category 1 to Category 2 means that Mexican air carriers may not establish new service to the United States; they may continue their existing service, however.

"While Mexico has been responsive to the FAA's findings and has made significant improvements in recent months, it was unable to fully comply with all of the international safety standards," the FAA said. "However ... Mexico continues to make progress. The FAA is committed to working closely with the Mexican government and providing technical assistance to help Mexico regain its Category 1 rating."

A Category 1 rating means that a country's civil aviation authority meets all ICAO standards. Category 2 means that a country "either lacks laws or regulations necessary to oversee air carriers in accordance with international standards or that its civil aviation authority ... is deficient in one or more areas, such as technical expertise, trained personnel, recordkeeping or inspection procedures," the FAA said.

After the FAA announcement, Aeromexico, a Mexican airline that flies to and from U.S. airports, issued a statement noting that the FAA's action "does not refer to the level of safety of the airlines, nor does it reflect the safety of Aeromexico, which complies with the highest international standards of operational safety."



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Rudder Pedal Limitations

Citing two accidents involving "potentially hazardous rudder pedal inputs," the U.S. National Transportation Safety Board (NTSB) has asked the European Aviation Safety Agency (EASA) to modify its certification specifications to limit rudder pedal sensitivity.

The NTSB recommended that EASA Certification Specifications for Large Aeroplanes be modified to "ensure safe handling qualities in the yaw axis throughout the flight envelope."

After the new standard has been established, EASA should "review the designs of existing airplanes to determine if they meet the standard," the NTSB said. "For existing airplane designs that do not meet the standard, ... EASA should determine if the airplanes would be adequately protected from the adverse effects of a potential aircraft-pilot coupling (APC) after rudder inputs at all airspeeds. If adequate protection does not exist, EASA should require modifications, as necessary, to provide the airplanes with increased

protection from the adverse effects of a potential APC after rudder inputs at high airspeeds."

Both accidents cited by the NTSB involved wake turbulence encounters during which pilots' rudder inputs caused the vertical stabilizer limit loads to be exceeded by a large margin.

The first accident was the Nov. 12, 2001, crash of an American Airlines Airbus A300 after takeoff from John F. Kennedy International Airport in New York. All 260 people in the airplane were killed, along with five people on the ground. The investigation revealed that, during the encounter with the wake of a Boeing 747, the first officer "made a series of full alternating rudder pedal inputs before the airplane's vertical stabilizer and rudder separated in flight."

The second accident involved an Air Canada A319, which experienced an in-flight upset on Jan. 10, 2008, after



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encountering wake turbulence from a 747 while climbing from Flight Level (FL) 360 (approximately 36,000 ft) to FL 370. The crew declared an emergency and diverted to Calgary, Alberta. Three of the 88 people in the airplane were seriously injured and 10 received minor injuries.

A subsequent accident analysis and simulation by Airbus found that the rear vertical stabilizer attachment had experienced loads 29 percent greater than the design limit, primarily as a result of "the flight crew's series of alternating rudder pedal inputs and ... not the result of the wake turbulence," the NTSB said.

Proposed Penalties

The U.S. Federal Aviation Administration (FAA) has proposed a \$230,000 civil penalty against Continental Airlines for allegedly operating a Boeing 767 on 22 revenue flights during a time when the airplane was not in compliance with U.S. Federal Aviation Regulations.

The FAA says the airline replaced the 767's nosewheel and tire assembly without installing a required axle washer.

The agency has proposed smaller civil penalties against 11 companies for allegedly violating U.S. Department of Transportation Hazardous Materials Regulations.

The largest of the proposed penalties — \$91,000 each — were against Boston Scientific Corp. of Natick, Massachusetts, U.S., and Cardinal Health of Madison, Mississippi, for allegedly offering fiberboard boxes containing flammable liquids to DHL. In each case, DHL employees discovered the leaking package, the FAA said.

Lesser penalties were proposed against nine other companies accused by the FAA of similar violations.



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Seat Belt Airbag

A U.S. manufacturer of aircraft seat restraints has received a supplemental type certificate from the European Aviation Safety Agency (EASA) to allow the retrofitting of general aviation aircraft with its seat belt airbags.

The AmSafe seat belt airbag already is being installed on 80 percent of new single-engine general aviation aircraft as standard equipment, the Phoenix-based company said. It also has been installed in commercial aircraft at more than 50 airlines around the world.

The company describes the seat belt airbag as a “self-contained, modular restraint system designed to improve occupant protection from serious head-impact injury and to enhance one’s ability to exit the aircraft following an otherwise survivable accident.”

The seatbelt airbag is deployed when the system’s sensors detect a crash. AmSafe says the device has saved more than 17 lives since it was first installed in 2001.

SMS Recommendations

An aviation rule-making committee (ARC) has recommended that the U.S. Federal Aviation Administration (FAA) issue regulations and guidance on the implementation of safety management systems (SMS).

The ARC, which developed its recommendations after reviewing public comments that were submitted on an FAA advance notice of proposed rulemaking (ANPRM), said that regulations would be desirable, even though the FAA already has issued advisory information on SMS development and implementation.

In developing the regulations, the FAA should, among other things, address methods of protecting SMS safety information and proprietary data against disclosure and inappropriate use, the ARC said.

“Protecting safety information from use in litigation (discovery), Freedom of Information Act (FoIA) requests and FAA enforcement action is necessary to ensure the availability of this information, which is essential to SMS,” the ARC said in its recommendations to the FAA. “The ARC believes that this issue can only be adequately addressed through legislation in the case of discovery, subpoena and FoIA requests. This protective legislation must be in place prior to promulgation of an SMS rule.”

The ARC characterized SMS as “the next step in the evolution of safety in aviation, based on processes and tools to systematically identify hazards and mitigate the risk associated with those hazards.”

It also noted that its recommendation is the first step in what will be a lengthy rule-making process, “and it is clear the FAA has a lot of work to do before a proposal can be initiated.”

The process will include development of a cost-benefit analysis and an evaluation of alternative methods for small businesses that are subject to any new regulations.

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Human Factors Coordination

The two U.S. agencies responsible for human factors research relating to implementation of the Next Generation Air Transportation System (NextGen) — the modernization of U.S. airspace — have failed to establish a “cross-agency human factors plan,” the Government Accountability Office (GAO) says.

The GAO praised the Federal Aviation Administration (FAA) and National Aeronautics and Space Administration for “coordinating their NextGen human factors research efforts” but said that the absence of a coordination plan has prevented the agencies from designating the areas that should be the subject of upcoming research.

In a report to Congress, the GAO recommended that the FAA develop a coordination plan and give the people in key positions the authority to set priorities for human factors research.

Fatigue Risk Management

The U.S. Federal Aviation Administration (FAA) has set an Oct. 31 deadline for U.S. air carriers to submit a fatigue risk management plan (FRMP) “outlining policies and procedures for reducing the risks of flight crewmember fatigue and improving flight crewmember alertness.”

FAA Information for Operators (InFO) bulletin 10013, issued in early August, said the FRMP would be required of air carriers operating under U.S. Federal Aviation Regulations Part 121.

The FAA said that it would issue another InFO and FAA Order 8900.1, *Flight Standards Information Management System (FSIMS)*, to provide guidance on the development and implementation of an FRMP.

In addition, the FAA has issued Advisory Circular (AC) 120-103, *Fatigue Risk Management Systems for Aviation Safety*, and amended versions of several related ACs to discuss the development of an overall fatigue risk management system (FRMS).

AC 120-103, which is not mandatory, describes the basic concepts of an FRMS and its role in aviation operations, along with implementation guidelines.



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Finances Linked to Safety Risks

Air operators in Australia have identified a shaky economy as the greatest risk to aviation safety, according to a survey by the Civil Aviation Safety Authority of Australia (CASA).

CASA surveyed 789 operators — a number that excludes the 12 largest regular public transport operators. Similar surveys are conducted annually to gather operational and safety data.

About 30 percent of the operators questioned said that economic conditions and profitability represented the greatest “potential risk to safety.” Second on the list was “unsafe operators being allowed to continue operating” — a

factor cited by nearly 20 percent of those questioned. Other areas identified as presenting safety risks included issues relating to operational personnel, “aircraft characteristics,” airport issues, airspace issues and “lack of understanding of safety management systems.”

Despite their concerns, 56 percent of the operators said that they believe aviation is “extremely safe” or “very safe,” CASA said. Two percent said that they believe Australian aviation is “not very safe.”

Most of the air operators responding to the survey flew their aircraft fewer than 1,000 hours per year. Twenty-two percent operated one aircraft, and 20 percent operated two aircraft. Fifty-eight percent said that their operations involved carrying passengers. The survey also found that half of these operators’ fixed-wing aircraft were built before 1980; most of their helicopters, however, were manufactured after 1990.

In Other News ...

The Civil Aviation Safety Authority of Australia (CASA) is updating its **maintenance rules** and expects the new package of regulations to take effect in June 2011. The revisions are intended to “provide Australian aviation with clearer, more concise and internationally harmonized maintenance rules,” CASA said. ... Data from the European Aviation Safety Agency (EASA) show that in 2009, there was one **fatal accident** involving a commercial air carrier operated by a company from an EASA member state. The June 1 crash of an Air France Airbus A330 over the South Atlantic killed 228 people. ... The International Association of Flight Training Professionals is being formed, with plans to begin developing a database of global **pilot training** best practices. More information is available from Robert Barnes at <RBarnesAZ@aol.com>.



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