

### Anti-Icing Recommendations

Restricted fuel flow, probably caused by ice in the fuel feed system, led to the Jan. 17 crash of a British Airways Boeing 777-200ER just short of the landing runway at London Heathrow Airport, the U.K. Air Accidents Investigation Branch (AAIB) said in a report that recommended interim measures to reduce such risks in the future.

One of the 152 people in the airplane was seriously injured in the crash, and 12 received minor injuries. The airplane was destroyed.

In its interim report on the accident, the AAIB said that ice likely formed in the fuel during the long Beijing-to-London flight, conducted with low fuel flows and in an “unusually cold” environment in which the fuel temperature was as low as minus 34 degrees C (minus 29 degrees F). The report noted that the flight was operated within certified operational limits at all times.

“All aviation fuel contains water which cannot be completely removed, either by sumping or other means,” the report said. “Therefore, if the fuel temperature drops below the freezing point of the water, it will form ice. The majority of flights have bulk fuel temperatures below the freezing point of water, and so there will always be a certain amount of ice in the fuel.”

The AAIB recommended that the European Aviation Safety Agency (EASA) and the U.S. Federal Aviation Administration (FAA), working with Boeing and Rolls-Royce, the manufacturer of the accident airplane’s Trent 895-17 turbofan engines, “introduce interim measures ... to reduce the risk of ice formed



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from water in aviation turbine fuel causing a restriction in the fuel feed system.”

In response, the EASA said that it will work with the FAA to define acceptable interim measures.

Other recommendations called on the EASA and the FAA to “consider the implications of the findings of this investigation on other certificated airframe/engine combinations” and “review the current certification requirements to ensure that aircraft and engine fuel systems are tolerant to the potential buildup and sudden release of ice in the fuel feed system.”

The EASA and the FAA have begun the reviews to evaluate the implications of the findings for other airframe-engine combinations and will review the need for future rule-making action.

The AAIB investigation of the accident is continuing.

### Qantas Safety Review

Qantas officials have been told to develop a plan to address deficiencies in meeting maintenance performance goals. The Civil Aviation Safety Authority of Australia (CASA) says that a number of improvements are needed as a result of a special CASA review of the airline.

The review followed several safety incidents involving Qantas aircraft, including a July 25 incident in which a section of the fuselage separated from a Boeing 747-400 while the airplane was at 29,000 feet en route from Hong Kong to Melbourne, Australia. The separation resulted in a rapid decompression and diversion to Manila, Philippines, where the airplane was landed safely. No one was injured in the incident. A

preliminary report by the Australian Transport Safety Bureau said that the fuselage ruptured after a passenger oxygen cylinder burst.

CASA also told Qantas that it must examine “whether the existing lines of authority and control over maintenance within the airline are delivering the best possible outcomes.”

While Qantas completes these tasks, CASA will conduct two more audits of the airline. The first is designed as a full maintenance audit of one airplane from each major airplane type being used by the airline — 747-400s, 737-400s and 767-300s — to ensure that all maintenance documentation has been completed. The second audit will examine the effectiveness of the airline’s maintenance

systems in managing and implementing airworthiness directives.

“By taking action now, future safety problems will be avoided,” said Mick Quinn, CASA deputy chief executive officer. “The wide-ranging actions CASA has initiated will prevent any downward trend in Qantas maintenance performance.”



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### Aid for Search-and-Rescue Efforts

The Canadian government is proposing regulatory changes to require aircraft to be equipped with an emergency locator transmitter (ELT) that operates on 406 MHz, instead of the existing requirement for an ELT that can transmit on 121.5 MHz.

The proposed regulation also would allow an alternative means of emergency notification, as long as it is equivalent in performance to the 406 MHz ELT.

Lawrence Cannon, minister of transport, infrastructure and communities, described the 406 MHz equipment as “the aircraft’s lifeline to search-and-rescue services.”

The new regulations would bring Canadian requirements in line with those of the International Civil Aviation Organization, which currently requires 406 MHz ELTs on all international commercial passenger aircraft and recommends their use on all other aircraft beginning Feb. 1, 2009. On that date, the International Cospas-Sarsat Programme, which coordinates the detection of distress signals, will no longer monitor distress signals from 121.5 MHz ELTs.

Cospas-Sarsat says current digital 406 MHz beacons, which can transmit unique beacon identifications and position information acquired from global navigation satellite systems, relay positions of aircraft (and ships) in distress faster and more accurately than 121.5 MHz beacons.



U.S. Coast Guard

### ‘Mixed Picture’ of Australian GA

General aviation in Australia is an industry in transition, according to a report released by Federal Infrastructure and Transport Minister Anthony Albanese.

“While parts of the industry are growing and prospering, some smaller operators are struggling to remain viable,” Albanese said. “The commercialization of general aviation airports, skill shortages, a complex regulatory environment and the aging of the small aircraft fleet have all created a challenging operating environment.”

The report includes 18 recommendations, among them suggestions to improve awareness of general aviation in the government’s existing business assistance programs and to establish targets for growth in the exporting of aviation services. The report said that the industry supports CASA’s efforts to become “a more effective and efficient regulator” and that there is little support for self-regulation.

### Brake Inspections

An Indonesian investigation of an incident involving a main landing gear failure on a Boeing 737 has led to a series of safety recommendations by the Indonesian National Transportation Safety Committee (NTSC), calling for inspections of 737-200/300/400/500 series airplanes with more than 15,000 cycles since overhaul to check for cracks in brake mounting holes.

The landing gear failure, which occurred in Banjarmasin on July 23, involved a crack in a brake mounting hole. The landing gear assembly on the incident airplane had been in service for 15,218 cycles. The Boeing overhaul manual calls for inspections of the area at intervals not exceeding 21,000 cycles or 10 years in service.

NTSC recommendations say the Indonesian Directorate General Civil Aviation should require Indonesian operators of the affected airplanes to conduct one-time nondestructive tests, followed by eddy current inspections during each “C” check; the inner cylinder/sliding member assemblies should be replaced if a crack is found in one or more brake mounting holes or other parts of the assembly.

Similar recommendations were issued to the European Aviation Safety Agency, the U.S. Federal Aviation Administration and Boeing.



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### Safety Improvement Program

The U.S. Federal Aviation Administration (FAA) has been told to implement 13 new recommendations developed by an independent team that reviewed the U.S. aviation safety system.

Transportation Secretary Mary E. Peters said the recommendations, being implemented immediately, would “improve both the intensity and the integrity of the FAA’s safety program.”

One recommendation says that the FAA “should retain the right to ground any plane not in compliance with an applicable AD [airworthiness directive],” and should not be expected to conduct a risk assessment before taking action.

Another recommendation calls for the FAA to have guidance in place by the end of the year to “ensure that airworthiness directives and their

deadlines are fully understood by all appropriate FAA officials and airlines.” A third calls for “more rigorous and systematic oversight” of the FAA voluntary disclosure program. For the most part, however, the report affirmed the current safety system and especially the voluntary reporting programs.

Flight Safety Foundation praised the recommendations and urged the FAA to implement them quickly.

“The current regulatory approach to aviation safety in the United States is working and is a model for civil aviation authorities around the world,” said Foundation President and CEO William R. Voss. “But that does not mean that there shouldn’t be an occasional review to see if there are ways to make the FAA safety programs even more effective. The recommendations ... are solid and should be implemented.”



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The Foundation is a leading proponent of the need for a free flow of information among all segments of the aviation industry and says U.S. air carriers have developed an excellent safety record in part because pilots and management are able to review flight information and collaborate with regulators “so that the causes of minor incidents during normal flight operations can be identified and corrected before a major accident occurs.”

### In Other News ...

The **U.S. Federal Aviation Administration’s** audits of airworthiness directives at U.S. air carriers have found an overall compliance rate of 98 percent, the agency says. ... The **Civil Aviation Safety Authority of Australia** (CASA) has proposed regulations for the issuance of multi-crew pilot licenses (MPL). A notice of proposed rulemaking says the minimum MPL aeronautical knowledge requirements should be the same as the requirements for obtaining an air transport pilot license and instrument rating. ... The **South Korean** aviation system has received a score of 98.82 out of 100 in the Universal Safety Oversight Audit Programme (USOAP) audit by the International Civil Aviation Organization (ICAO) — the highest score of 108 countries

evaluated. The score reflected improvement since ICAO’s first audit in 2000, when South Korea ranked 53rd with a compliance rating of 79.79. ... **Gulf Air** has adopted the Aviation Quality Database (AQD) Safety Management System, an integrated safety, quality and risk management system that combines quality and assurance auditing with flight, cabin maintenance and ground safety occurrence reporting.



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### Eclipse Recommendations

The U.S. Federal Aviation Administration (FAA) has accepted the recommendations of a panel that reviewed certification of the Eclipse EA500 very light jet (VLJ). The six recommendations included a call for the FAA and the manufacturer to analyze trim actuator failures being reported by operators.

The panel said that technical problems are common during certification of a new airplane, but “a lack of commonly used internal FAA documentation caused the perception that the aircraft might not have been properly certified.” The panel also cited “a lack of effective communication between Eclipse and the FAA, and between the responsible offices within the agency.”

Acting FAA Administrator Robert A. Sturgell said that the panel’s comments will be “invaluable as we continue certifying these new types of aircraft.”

*Compiled and edited by Linda Werfelman.*