Safety News

Contradictory Requirements

Contradictory guidance from the U.S. Federal Aviation Administration (FAA) about on-condition maintenance must be resolved to ensure that operators are consistent in their handling of the maintenance programs, the U.S. National Transportation Safety Board (NTSB) says.

The NTSB, in a letter accompanying several related safety recommendations to the FAA, said the FAA should reconcile conflicting statements in two advisory circulars (ACs): AC 120-17A, "Maintenance Control by Reliability Methods," and AC 120-16E, "Air Carrier Maintenance Programs."

In AC-120-17A, the FAA refers to "hard time, on-condition or condition monitoring" as "the primary aircraft maintenance processes." In AC 120-16E, the FAA says that air carriers "should not use terms such as hard time, on-condition or condition monitored in [their] maintenance schedule" and that "these terms represent obsolete 1960s methodology [and] are vague."

"The NTSB is concerned about the differing guidance that is provided to operators," the safety board said in its letter to the FAA. "Therefore, the NTSB recommends that the FAA resolve the differences … in regard to FAA philosophy and use of on-condition maintenance programs. Further, once the differences … are resolved, the NTSB recommends that the FAA review existing on-condition maintenance programs to ensure that they are compatible with the most current accepted philosophy."

The recommendations were issued as a result of the NTSB investigation of the Nov. 8, 2005, crash of a Business Air Embraer 110P1 after takeoff from Manchester-Boston Regional Airport in Manchester, New Hampshire, U.S. The pilot of the unscheduled cargo flight was seriously injured

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and the airplane was destroyed in the crash into a department store's garden center.

The NTSB said that the probable cause was the pilot's "misapplication of flight controls following an engine failure." Contributing factors included "the failure of the sun gear, which resulted in the loss of engine power," the NTSB said, adding that contributing factors in the sun gear failure were "the engine manufacturer's grandfathering of previously recommended but less reliable maintenance standards, the … FAA acceptance of the engine manufacturer's grandfathering, the operator's inadequate maintenance practices and the FAA's inadequate oversight of the operator."

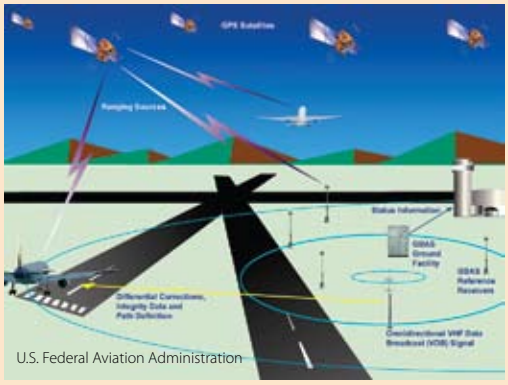
GPS-Based Landing System Approved

The U.S. Federal Aviation Administration (FAA) has approved the first ground-based GPS (global positioning system) augmentation system in the United States, to be implemented early in 2010 in Memphis, Tennessee.

Approval of the Smartpath Precision Landing System, manufactured by Honeywell, "marks the successful completion of a partnership between the FAA and Airservices Australia to build and certify a ground-based augmentation system (GBAS)," said FAA Administrator Randy Babbitt. "We expect GBAS to become an asset to airports around the world."

Another system is expected to be installed in Sydney, Australia.

GBAS works by augmenting GPS signals to provide precision approach guidance to runways. The FAA said use of GBAS in descent and approach operations will allow for increased capacity at crowded airports. The current system provides for precision approach guidance to 200 ft above the runway surface; within a few years, improvements will allow for descent to the runway surface in zero-visibility conditions, the FAA said.



U.S. Federal Aviation Administration

Safety Platform

A single safety oversight body should be created to take responsibility for standardizing policies and technical certifications among operators in all Central American countries, the Latin American and Caribbean Air Transport Association (ALTA) says.

The provision was one of several included in a safety resolution adopted at the ALTA Airline Leaders Forum and annual general meeting in October.

The resolution said the safety oversight body should be responsible for "standardized policy alignment and technical certification of all operators of Central American countries"; development of "unified standards and processes" in regulations and standard operating procedures related to aircraft, personnel, airways and other related areas; implementation of comprehensive interstate relations; and continued cooperation in improving safety.

Contaminated Halon

A "considerable" amount of the halons used in aircraft fire-suppression equipment may not meet specifications, the U.K. Civil Aviation Authority (CAA) says.

The CAA said that both Halon 1211, which is used in portable fire extinguishers in aircraft cabins and flight decks, and Halon 1301, which is used in extinguisher systems for engines, auxiliary power units, cargo holds and lavatory trash receptacles, are affected (*ASW*, 9/09, p. 29).

The CAA said that it is working with the European Aviation Safety Agency (EASA) to determine whether the problem presents safety risks and what steps will be taken.

Because the problem may involve a large quantity of equipment, removal of the affected extinguisher systems is not practical, the CAA said in communications to owners and operators, maintenance companies, production organizations and pilots.

Companies that have been supplied with the suspect halons have been notified and asked to "identify extinguishers filled from the suspect batches, and one filled from each batch will have the Halon tested against the relevant standard," the CAA said. "This will allow the total quantity of contaminated Halon and the amount of contamination in each batch to be determined."

The agency said it would provide updated information as it becomes available to affected owners and operators.

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Icing Cautions

The U.K. Air Accidents Investigation Branch (AAIB), citing an April 9, 2008, incident in which the elevator of a BAE Systems Jetstream 4102 was jammed by accumulating ice, has recommended that the manufacturer review the icing information to ensure that pilots have adequate instructions on how to respond to in-flight icing-related control problems.

The incident occurred after departure from Aberdeen, Scotland, as the airplane climbed through 9,000 ft for a flight to Vágar, one of the larger islands in the Faroe Islands. The flight crew used "changes in power and higher forces on the elevator controls to descend into warmer air, where the ice melted," the AAIB said in its final report on the incident.

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None of the 13 people in the airplane was injured in the incident, and the airplane was not damaged.

Weather before departure had included snow and freezing conditions, and the airplane was not appropriately deiced and anti-iced, the report said. The commander initially planned for the airplane to be deiced before departure but later said that fluid deicing probably was not necessary; instead, he asked ground crewmembers to sweep off any ice or snow and observed them sweeping the wings, the report said.

The report added that it was "highly likely" that ice or slush was on the airplane's horizontal tail surfaces before takeoff, "and that, as the aircraft entered colder air at altitude, this contamination caused the mechanical pitch control to become restricted."

The AAIB recommended that BAE Systems review the Jetstream 41's emergency and abnormal checklist "to ensure that it includes adequate instructions and advice for flight crews who encounter in-flight control problems associated with airframe ice."

A second recommendation called on the company to review checklist advice "concerning flap extension following failure of the aircraft's ice protection systems, or when ice is present on the airframe, to ensure that advice and instruction relating to flap extension is optimized for safety."

Safety Course

The Netherlands Aviation College has conducted a government safety inspectors course in Zambia that also provided training to senior pilots in the hope of increasing their appreciation of the responsibilities of the Zambian Department of Civil Aviation.

The course was taught in early October by instructors from the college, one of eight training centers worldwide that has been endorsed by the International Civil Aviation Organization to provide these classes.

Dominic Sichinga, Zambian permanent secretary of communications and transport, said that the session was "part of the commitment of the government of the Republic of Zambia to ensure it meets its international aviation safety oversight obligations."

The Netherlands Aviation College typically teaches its classes in Hoofddorp, the Netherlands; this session was offered in Zambia through the efforts of the Avi-Assist Foundation as part of its campaign to make best safety practices available to aviation professionals in Africa.

—Tom Kok

Runway Incursions Decline

The number of serious runway incursions at U.S. airports declined 50 percent in fiscal year 2009, which ended Sept. 30, compared with the previous 12-month period, the U.S. Federal Aviation Administration (FAA) says.

The FAA defines a "serious" incursion as one in which "a collision was narrowly avoided, or there was a significant potential for collision that resulted in the need to take quick corrective action."

The FAA recorded 12 serious incursions, including two involving commercial air carriers, in fiscal 2009; in fiscal 2008, 25 serious incursions were recorded, including nine that involved commercial air carriers.

"While the 50 percent reduction is remarkable, there is still much work to be done to continue to reduce the potential risk," FAA Administrator Randy Babbitt said.

The FAA intensified efforts to reduce the risk of runway incursions and wrong-runway departures after a series of close calls in 2007, when 24 serious runway incursions were recorded, including eight involving air carriers. Those efforts included training for pilots and completion of proper airport signage and markings.

The agency's continuing efforts include an international runway safety meeting scheduled for Dec. 1–3 in Washington.

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In Other News ...

The Italian Air Safety Board (ANSV) is calling on safety authorities in Europe and the United States to consider asking Boeing to develop procedures by which flight crews can identify and manage problems involving bleed air check valves in CFM International CFM56-7B22 engines. The board cited a June 13, 2009, incident in which a 737-700 experienced an engine flameout on approach to Florence Airport. … The U.S. **National Transportation Safety Board** (NTSB) is investigating an Oct. 21, 2009, incident in which a Northwest Airlines Airbus A320 overflew the Minneapolis-St. Paul International/Wold-Chamberlain Airport by 150 nm (278 km). A preliminary statement from the NTSB said that the flight crew, flying at 37,000 ft en route from San Diego, claimed to have been "in a heated discussion over airline policy and they lost situational awareness."

Makaristos/Wikimedia

Critical Events in EMS Flight

About 5 percent of patients on emergency medical services (EMS) flights experience a "critical event" during flight, according to a study in the *Canadian Medical Association Journal*.

The study defined a "critical event" as one involving "a major resuscitation, rapid loss of blood pressure, respiratory arrest [or] death."

The study's authors — Dr. Jeff Singh and Dr. Russell MacDonald — based their findings on the cases of 19,228 adult patients in Ontario, Canada. They said that, despite the 5 percent incidence of critical events, in-flight deaths were rare.

Compiled and edited by Linda Werfelman.