

Proposed Penalty for Boeing

The Boeing Co. faces a proposed civil penalty of \$13.6 million for its alleged failure to meet a government deadline to submit service instructions for airlines to install systems designed to reduce the risk of fuel tank explosions.

“Manufacturers must provide the necessary instructions so the airlines can comply with this important safety regulation,” U.S. Transportation Secretary Ray LaHood said.

The U.S. Federal Aviation Administration (FAA) says that, since the July 1996 crash of a Trans World Airlines Boeing 747 — which investigators attributed to an explosion of flammable vapors in a fuel tank — it has issued 283 directives aimed at preventing vapor ignition in and around aircraft fuel tanks.

One directive, issued in 2008, set a Dec. 27, 2010, deadline for Boeing and Airbus — the companies responsible for the affected airplanes — to “develop design changes and service instructions for installing systems to further reduce fuel tank flammability” and submit the plans for FAA approval, the FAA said. The agency’s plans called for the installation of systems that would replace the oxygen-rich air in the fuel tanks with nonflammable nitrogen.

“Boeing missed the deadline for submitting service instructions for the 747s by 301 days, delivering them to the FAA on Oct. 24, 2011,” the FAA said. “The company was 406 days late in submitting service instructions for the 757s. In total, 383 U.S.-registered Boeing aircraft are affected by these delays.”

Airbus met the 2010 deadline.



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Under the Fuel Tank Flammability Rule, airlines are required to retrofit half of their affected airplanes by 2014 and the remainder by 2017. The FAA said that most operators — including those that received the late instructions from Boeing — will be able to meet those deadlines.

The manufacturer has 30 days from its receipt of the FAA letter to respond to the allegations.

African Action Plan

International aviation organizations are urging African nations to adopt a plan designed to correct deficiencies and strengthen regulatory oversight in the region’s aviation system.

The Africa Strategic Improvement Action Plan calls for establishing and funding independent civil aviation authorities in African nations; implementing “effective and transparent safety oversight systems,” accident-prevention measures that address runway safety and loss of control, flight data analysis (FDA) programs and safety management systems (SMS); and requiring all African air carriers to undergo the International Air Transport

Association’s (IATA’s) Operational Safety Audit.

These key areas were identified through IATA and International Civil Aviation Organization (ICAO) analysis of air transport accidents that occurred in Africa between 2006 and 2010.

“This analysis identified ... the main contributing factors to accidents [as] insufficient regulatory oversight and the lack of SMS implementation,” ICAO said. “Implementation of tools such as FDA could have pinpointed precursors to the major accident types, namely runway excursions, controlled flight into terrain and loss of control. Runway excursions alone accounted for about a quarter of African accidents.”



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TAWS Requirement

Canadian operators of certain smaller aircraft have been given two years to install a terrain awareness and warning system (TAWS) in their airplanes.

Denis Lebel, minister of transport, infrastructure and communities, said the new requirement will “significantly increase safety for small aircraft, which fly into remote wilderness or mountainous areas where the danger of flying into terrain is highest.”

Transport Canada said that the requirement will apply to operators of “private turbine-powered and commercial airplanes with at least six passenger seats.”

Lebel said the regulations comply with International Civil Aviation Organization standards. In the past, the Transportation Safety Board of Canada has recommended wider use of TAWS “to help pilots assess their proximity to terrain.”

Positioning Problem

Operators of airplanes with General Electric (GE) CF6-80C2 engines should be required to take steps to ensure the correct assembly of a spray shield and support bracket unit that — when incorrectly installed — has been associated with engine fires, the U.S. National Transportation Safety Board (NTSB) says.

The NTSB issued a safety recommendation to the U.S. Federal Aviation Administration (FAA), calling on the FAA to issue an airworthiness directive to “require the incorporation of [GE] Aircraft Engines Service Bulletin 73-0242, ‘Fuel and Control — (73-00-00) — Spray Shields and Support Bracket — Improvement’ to prevent fires on CF6-80C2 engines due to mis-assembly of the two-piece support bracket and spray shield on the front of the integrated drive generator fuel-oil heat exchanger.”

The NTSB cited a Feb. 8, 2012, engine fire aboard an American Airlines Boeing 767-300ER shortly after takeoff from John F. Kennedy International Airport (JFK) in New York for a flight to Haiti. The pilots shut down the engine, discharged two fire extinguisher bottles into the engine, declared an emergency and returned to JFK. None of the 213 people in the airplane were injured.

The investigation is continuing, but the NTSB said that investigators found that “numerous wires and cables on the lower half of the engine showed signs of insulation that had been burned away or partially melted.” They also found that the support bracket and spray shield had been assembled incorrectly, with the bracket over the spray shield. The incorrect positioning of the two parts “distorted the fuel tube flange, resulting in an inadequate clamping of the seal between the fuel tube



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flange and the ... fuel-oil heat exchanger.” Part of the seal was missing.

A similar engine fire occurred on a Delta Air Lines 767-300ER on July 12, 2006, shortly after takeoff from Rio de Janeiro, Brazil, the NTSB said. The airplane returned to Rio de Janeiro for a landing that resulted in a hot brake warning and deflation of six main landing gear tires, the board said. Damage to the engine was “virtually identical” to the damage found on the American Airlines 767.

In Memoriam

Two key figures in aviation safety — Robert L. Helmreich and Bryan Wyness — have died.

Helmreich, a pioneering developer of crew resource management initiatives and the line operational safety audit, died July 7. He was 75.

He was a psychology professor at the University of Texas at Austin and the principal investigator of the University of Texas Human Factors Research Project, which studies individual and team performance, human error and the influence of culture on behavior in aviation and medicine.

He served in the U.S. Navy and received bachelor of science, master of science and doctoral degrees from Yale University.

He was awarded the Flight Safety Foundation-Boeing

Aviation Safety Lifetime Achievement Award in 2005, two years before he retired from the University of Texas and was named a professor emeritus. He also was a recipient of the American Psychological Association’s Franklin Taylor Award and the University of Texas’ highest honor, the Pro Bene Meritus Award.

Wyness, a commissioner with the New Zealand Transport Accident Investigation Commission (TAIC), died July 20 in a motorcycle accident. He was 71.

He was first appointed to the TAIC in 2004, after a long career with Air New Zealand, where he had been vice president for flight operations. He also was a former member of the Flight Safety Foundation International Advisory Committee.

ATC Consolidation

Plans to consolidate a number of relatively small air traffic control (ATC) facilities into large integrated facilities over the next 20 years will depend on the U.S. Federal Aviation Administration’s (FAA’s) ability to meet a number of technical and financial challenges, a report from a government oversight office says.

The U.S. Department of Transportation’s Office of Inspector General (OIG) said that the challenges include successfully aligning ongoing construction projects; coordinating the projects with the offices of the Next Generation Air Transportation System (NextGen), the elaborate overhaul of air traffic management; and finalizing cost estimates.

The FAA already has approved a plan to consolidate 49 ATC facilities into one integrated facility handling traffic in New York, New Jersey and the Philadelphia area. The agency has not yet determined where to build the \$2.3 billion facility, the report said.

The FAA operates 561 ATC facilities nationwide, many of which are outdated, the report said.

