FAA orders replacement of Airbus airspeed sensors

JOAN LOWY, Associated Press Writer
WASHINGTON (AP) – U.S. officials on Thursday ordered the replacement of Airbus airspeed sensors of the type suspected of playing a role in the loss of Air France Flight 447 and all 228 people aboard in June.

The Federal Aviation Administration said in a notice published in the Federal Register that U.S. airlines operating Airbus A330s and A340s must replace on each plane within 120 days at least two of three sensors made by European electronics giant Thales Corp. The approved replacements are made by North Carolina-based Goodrich Corp.

The order affects 43 U.S. registered planes — 32 operated by Northwest Airlines, now part of Delta Air Lines, and 11 operated by US Airways. All are A330s; there are no A340s registered in the U.S.

FAA said the order was based on "numerous reports" that the sensors, called Pitot tubes, can become blocked at high altitudes in stormy weather. When that happens, it can lead to a loss of airspeed information or inaccurate information.

Northwest and US Airways had already replaced their older Thales Pitot tubes with newer model tubes. Since then, US Airways has installed Goodrich tubes to replace the Thales replacement, spokesman Morgan Durant said.

Delta spokeswoman Ashley Black said the airline is working with Airbus and Goodrich to make the replacements by FAA's deadline.

While a car's speedometer uses tire rotation to calculate speed, an airplane uses Pitot tubes to measure changing air pressure. Computers interpret that information as speed. And while a car with a broken speedometer might be little more than an inconvenience, many airplane control systems rely on accurate speed information to work properly.

In Airbus planes, which are highly automated, recent incidents indicate that no airspeed data or inaccurate data may sometimes trigger a series of events, including the shutdown of the autopilot and the automatic power system. It can also result in the plane's computers shifting to what is called "alternate law," where nearly complete control of the aircraft's systems are placed in the hands of the pilot for manual flight.

A sudden reversion to alternate law is usually a last ditch effort to give a pilot a chance to save a troubled aircraft, aviation safety experts said.

"Depending on the prevailing airplane altitude and weather, this condition, if not corrected, could result in reduced control of the airplane," FAA said in its notice.

The European Aviation Safety Agency finalized a similar order on Aug. 31 to replace the Thales sensors with Goodrich sensors. FAA officials had been waiting for the European agency to act first since Airbus, a subsidiary of the European Aeronautic Defence and Space Company, is based in France.

French investigators have focused on the possibility that Flight 447's sensors iced over and sent false speed information to the computers as the plane ran into a thunderstorm at about 35,000 feet. The A330 disappeared over the Atlantic on June 1 during a Rio de Janiero-to-Paris

flight.

An important part of the investigation focuses on 24 automatic messages the plane sent during its final minutes. They show the autopilot was not working, but it is unclear whether the pilots shut it off or whether it shut down because of the conflicting airspeed readings.

Airbus spokesman Justin Dubon said the FAA announcement was a "precautionary measure."

"Both pitot tubes (Thales and Goodrich) are certified airworthy as the investigation continues," he said from Airbus headquarters in Toulouse, France. "What's important is that it is not known what caused the crash."

"We still have a long way to go to understanding fully what happened," he said.

Three weeks after the Air France crash, the National Transportation Safety Board announced it was investigating two other A330 flights that experienced a loss of airspeed data.

In May, a plane belonging to Brazilian company TAM Airlines lost airspeed and altitude data while flying from Miami to Sao Paulo, Brazil. Autopilot and automatic power also shut down and the pilot took over, according to an NTSB report. The computer systems came back about five minutes later.

On June 23, a Northwest flight hit rain and turbulence while on autopilot outside of Kagoshima, Japan. According to an NTSB report, speed data began to fluctuate. The plane alerted pilots it was going too fast.

NTSB investigators discovered at least a dozen previous instances of brief losses

of airspeed information when they reviewed archived flight data for Northwest's A330 fleet, The Associated Press reported last month.

All of the incidents took place in the Intertropical Convergence Zone, which extends from 5 degrees north of the equator to 5 degrees south, and is known for its frequent, intense thunderstorms. All the planes involved landed safely.

Associated Press Writer Angela Charlton in Paris contributed to this report.

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