Boeing Offers Second Option For 767 Brakes

The Boeing Company is responding to customer demand by unveiling a new braking option for the 767 airplane.

Boeing completed flight testing March 30 on a new main-gear wheel and carbon brake designed specifically for the 767-200 and -300 by French manufacturer Messier-Bugatti.

"Our airline customers told us they wanted a second option for 767 brakes. We are introducing the newly designed Messier-Bugatti brake to make sure they have that option," said Dan Mooney, Boeing 767 chief project engineer. "Listening to our customers is just one of the ways we're continuing to enhance the value of the 767."

The new 767 brakes utilize Messier-Bugatti's latest heatsink material, Sepcarb ®III, a carbon and carbon-composite material that has been in airline service for more than three years. With the introduction of the 767 brake, Messier-Bugatti becomes one of the nearly 1,000 world-class international suppliers with which Boeing works. Approximately half of these suppliers are in Europe.

"The testing at Roswell, N.M., and Edwards Air Force Base went extremely well, from both a performance and a maintenance standpoint," said Pete Goranson, lead engineer - 747/767 Landing Gear Systems.

Boeing will submit the test results to the Federal Aviation Administration in June 1999, with certification of the new brakes expected in mid-July. The brakes will be available for retrofit of existing airplanes and installation on new-production airplanes as early as third quarter 1999.

"The appeal of carbon brakes is simple - they are lighter and more capable than steel, so airplanes can dedicate less weight to the brakes and more to passengers and cargo, resulting in more revenue for our customers," Mooney said.

Before flight testing, Messier-Bugatti's newly designed wheels and brakes underwent more than 10 months of rigorous laboratory tests as part of a two-year development program that included structural, fatigue, performance and dynamics testing.

The comprehensive certification flight-test program completed last week included wet-runway, low- and moderate-energy rejected takeoffs (RTO) and performance landings in Roswell, N.M. A maximum-brake energy RTO test was performed successfully at Edwards Air Force Base on March 27, 1999.

A maximum-energy RTO is a dramatic test that involves accelerating an airplane with fully worn brakes to a takeoff speed of nearly 200 mph, and bringing it to a complete stop using only the brakes and the wing spoilers. Engine thrust reversers are not used to help slow down the airplane in this test. The brakes glow orange-red and reach temperatures of more than 3,500 degrees Fahrenheit from the energy absorbed while halting the airplane. Shortly after the stop, wheel fuse plugs melt to safely release tire pressure.

Preliminary analysis of the test data indicates that the Messier-Bugatti brakes are equivalent in performance to the AlliedSignal brakes introduced last year. Either suppliers' wheel and brake system may be installed on any carbon-brake-equipped 767-200 or 767-300.

Boeing is a long-time partner in the global economy, supporting more than 150,000 jobs each year with international suppliers; approximately 90,000 of these jobs are in Europe.

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