New Wing Tips Get Trial Run on First Boeing 767-400 ER

, April 27, 1999 - Mechanics temporarily bolted into place the new, highly back-swept wing tips of the 767-400ER (extended range). This trial run was recently conducted to verify the installation procedure and ensure that the hardware conforms to engineering specifications.

The left wing tip matched the wing end with no more than a hair-width variance along the surface.

"The fit is better than I ever dreamed," said Steve Walls, 767-400ER manufacturing engineer - Boeing Commercial Airplanes Group. "Our critical measurements averaged about 4 thousandths of an inch - that's the thickness of a piece of paper."

The new wing tips improve the overall aerodynamic efficiency of the 767 wing, providing about the same range capability of alternate wing-tip designs that would have extended the airplane's wingspan another 10 feet (3 meters).

This successful trial culminates a long journey. About 20 months ago, engineers began the detail design of the wing tip in Long Beach, Calif., at what was then McDonnell Douglas. At the same time, engineers at the Boeing facility in Everett, Wash., were designing the 767-400ER wing end and attach-points for the wing tip.

The team - separated by more than 1,000 miles - used computer-aided, three-dimensional interactive (CATIA) design to define the airplane parts. Once the drawings were released, the wing tips were fabricated by the Boeing composite manufacturing center near Puyallup, Wash., then transported by truck to the Everett factory.

The wing tips will be permanently installed on the airplane just before it rolls out of the factory this summer. The first 767-400ER is scheduled to deliver in May 2000.

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