

## **New Boeing 777 Raked Wing Tips Improve Fuel Efficiency, Good for the Environment**

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Raked wing tips that were installed this week onto the newest Boeing 777, the 777-300ER (extended range) jetliner, not only improve the bottom line they're good for the environment.

The 6.5-foot (1.98 meter) highly tapered wing-tip extensions are being added to both of Boeing's 777 long-range jetliners, the 777-300ER and 777-200LR (longer-range) to improve the airplane's performance. The wing tips help reduce takeoff field length, and increase fuel efficiency and climb performance. Faster climb performance can mean quieter neighborhoods.

Through the use of raked wing tips, the 777-300ER airplane is expected to achieve a 2 percent fuel efficiency improvement, saving as much as \$140,000 on fuel costs per year per airplane.

This equates to a savings of 1.3 million pounds of fuel per year per airplane, and 3.9 million less pounds of global warming carbon dioxide (CO<sup>2</sup>) being emitted into the environment. For every pound of fuel conserved, three fewer pounds of carbon dioxide are generated. The bottom line: the new raked wing tips help provide a more economical, cleaner and quieter airplane for the future.

The Boeing 767-400ER airplane was the first Boeing commercial airplane to use larger raked wing tips as a wing-span extension. Wing tip devices improve performance by reducing drag. Selection of the wing tip device - raked or winglets -- depends on the specific situation and the airplane model.

The 777-300ER's raked wing tips are built by Korean Air Lines' Aerospace Division in Busan, Korea. Korean Air also manufactures the 777-300ER's new wing-box extension, and flap track fairings and wing tips for all four 777 models.

The 777-300ER is the fourth of five 777 passenger models planned. In addition to extending the 777-300's range by 1,300 nautical miles (2,407 kilometers) to 7,250 nautical miles (13,427 kilometers), the 777-300ER is able to carry an additional 43,500 pounds (19,700 kilograms) of cargo.

Since launch, the 777 family of airplanes has captured 70 percent of its market. More than 30 customers worldwide have ordered 606 777s, including 49 Longer-Range 777s ordered by six customers: Japan Airlines, Air France, All Nippon Airways, EVA Airways, GE Capital Aviation Services and International Lease Finance Corp.

The first 777-300ER will be unveiled in a rollout ceremony in mid-November 2002. First flight will take place in early 2003.

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