

Introduction of Boeing 787

ANA's order for 50 Boeing 787 ahead of anyone else made it the launch customer for the aircraft and led to its involvement at the design and development stages. The Boeing 787 was rolled out in July 2007; ANA is scheduled to receive delivery of the first aircraft in 2008.



The Boeing 787 rollout in July 2007

■ Selection Criteria

ANA was in need of a next-generation, mid-sized aircraft in view of the expansion of Haneda Airport and to replace its current 767-300s and 767-300ERs. The Boeing 787 was chosen for its: (1) 300 passenger capacity; (2) dual-ser-

vice capability for domestic and international routes, as well as reliability, cost efficiency and comfort surpassing those of the Boeing 767-300; (3) and delivery in time for both the Haneda expansion and retirement of the 767-300.

■ Characteristics of Boeing 787

Increased Involvement of Japanese Corporations

The Boeing 787 is notable for the involvement of Japanese manufacturers in its development: Japanese corporations (Mitsubishi Heavy Industries, Kawasaki Heavy Industries, Fuji Heavy Industries) manufacture 35% of the airframe, and Toray provides the carbon-fiber composites used in the main structure.

Lighter Weight Through Composites, Improved Cabin Environment

Composite materials are used for structural parts including the main wings and fuselage, resulting in a much lighter craft. Despite its medium size (length: 56.7 meters; wingspan: 60.1 meters; height: 16.9 meters) the 787 has performance rivaling that of wide-body aircraft, and its cruise speed of Mach 0.85 equals that of today's fastest commercial airliners. The 787 also boasts about 15% more cargo space, as well as a spacious, humidified cabin environment with wider seats, wider aisles and larger windows. In addition, lavatories are equipped with Wash-lets—an industry first.

Enhanced Flight Safety and Efficiency

For better pilot visibility, the number of cockpit windows has been reduced from the conventional six to four larger ones. Cockpits also feature such cutting-edge equipment as the Head-Up Display (HUD), which lets flight crew confirm vital information without altering their line of vision; the Vertical Situation Display (VSD); an electronic check list; and the Electronic Flight Bag (EFB), for browsing digitalized manuals and viewing the airplane's position on the tarmac. This enhanced cockpit environment helps reduce the burden on flight crew while improving safety and efficiency.



Boeing 787 (generated image) ©Boeing



Enhanced visibility and instrumentation

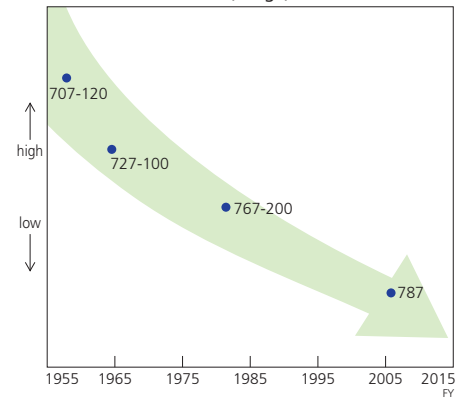


Larger windows



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Noise Level Reduction (Image)

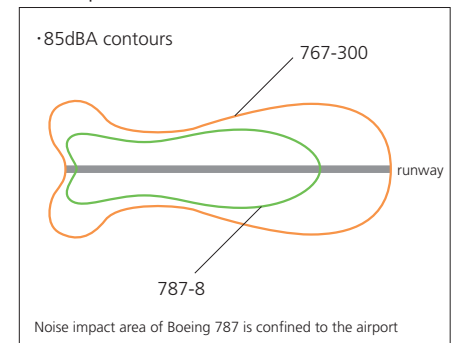


Spacious cabin (Image)



Lavatory equipped with Washlet

Noise Impact Areas



Boeing 787-8 and -3 Introduced
ANA is deploying the Boeing 787-8 and -3 variations. The 787-8 is the standard model with a cruising range of 14,800–15,700 km, while the 787-3 is designed for short-haul operation with a cruising range of 5,550–6,500 km.

20% More Fuel Efficient Than 767
Thanks to state-of-the-art technology and advanced aerodynamics, fuel efficiency has been improved by some 20% over the Boeing 767; the 787's Rolls-Royce Trent 1000 engines produce approximately 20% less CO₂ and 15% less NO_x.

40% Quieter
Compared with the Boeing 767-300, which is roughly the same size, the 787 is 40% quieter on takeoff.

Suited for ANA Operations
The 787-3 is designed for ANA's typical need: short-haul, frequent operation. For certain weather conditions peculiar to Japan, features responding to inte-

rior condensation and winter lightning are included as standard equipment.

Lower Maintenance Costs
A maintenance program for short-haul, frequent operation unique to ANA has been developed that allows highly cost-efficient maintenance for ANA. For example, highly durable paints, developed at our request, mean that the aircraft will not need to be repainted as frequently; the thrust control method, optimized for short-haul, frequent operations such as ours, was developed to lengthen the service life of engine parts. Lower engine maintenance costs are expected from these developments.



High-performance Rolls-Royce Trent 1000 engine