Safran Nacelles' large jet engine exhaust system takes flight on the first Boeing 777X airliner

The 777X exhaust system incorporates acoustic treatment across a portion of its surface, helping to reduce noise levels of the jetliner's high-thrust General Electric GE9X powerplants.

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The maiden flight today of Boeing's 777X jetliner marked a new milestone for Safran Nacelles' development and production of the largest jet engine exhaust system of its type ever manufactured for a civil aircraft.

Produced primarily in titanium, this system has a complex nozzle shape to optimize the aerodynamic flow of exhaust from the jetliner's engines. A portion of its surface incorporates acoustic treatment that contributes to reduced noise levels from the 777X's high-thrust General Electric GE9X powerplants.

Safran Nacelles has provided all of the exhaust system's developmental units – including those equipping the no. 1 twin-engine 777X (a 777-9 version) that began flight testing today from Paine Field in Everett, Washington, along with the first shipset to be incorporated on the initial jetliner to be received by an airline customer. Additionally, initial spare parts are now with Boeing Global Services (the aircraft manufacturer's services and support organization), and all engineering reports for airworthiness certification were delivered by Safran Nacelles on time.

Safran Nacelles' first major supplier program with Boeing

Safran Nacelles' exhaust system for the Boeing 777X has a complex nozzle shape to optimize the aerodynamic flow of exhaust from
the jetliner's GE9X jet engines.

The 777X exhaust system represents the first major role for Safran Nacelles as a Boeing supplier. With Safran Nacelles' experience and proprietary database, the company optimized the 777X exhaust system's design and manufacturing processes – applying its proven assessment methods for the performance of titanium components in the nozzle's high-temperature environment.

"Throughout the 777X program, Safran Nacelles has developed a strong and valued relationship with Boeing, and our company is fully committed to supporting the production as we ramp up our output to meet the airliner's delivery pace," explained Loïc Guillemin, Safran Nacelles' Director of Boeing Programs, who is based in the U.S. state of Washington, home to the 777X final assembly line at Everett.

The 777X's exhaust system is a large, two-piece center body and nozzle that benefits fully from the lower mass of titanium, as well as the metal's increased resistance to heat in high-temperature jet engine applications. An important characteristic of the exhaust system is its unlimited lifetime, enabling the system to be used throughout the operational service of the 777X jetliner on which it is installed.

Production resources enhanced at Safran Nacelles' Le Havre industrial site

Safran Nacelles produces the 777X exhaust system at the company's Le Havre, France industrial facility, where it has expanded the production resources and enhanced the acceptance area for its product line of large exhaust nozzles used on airliners.

As the largest version of Boeing's 777 widebody aircraft family, featuring cutting edge technology for enhanced travel experience and a reduced carbon footprint, the 777X has a maximum seating capacity of 400-plus passengers. To date, Boeing has announced more than 340 orders for the 777X.