First 787 landing with Messier-Dowty composite landing gear braces

Messier-Dowty has achieved a historical milestone in the development of the Boeing 787 landing gear, with the first successful takeoff and landing of a commercial flight test aircraft equipped with composite braces on the main landing gear.

This test flight, which took place on July 20th on Airplane ZA001 over Boeing Field, is the culmination of major design and development efforts to introduce composite technologies on key structural landing gear components for the 787 program.

The use of composite materials, in conjunction with the expanded use of titanium on other major structural components, including the inner cylinder, significantly reduces the weight of the landing gear versus previous generation steel gears. In addition, composites provide higher resistance to corrosion and fatigue than UHTS steel parts, contributing to greater in-service reliability and greater time between overhauls.

The composite development work for the braces, designed and managed by Messier-Dowty, in conjunction with technical expertise from The Boeing Company, has been Safran-wide effort, leveraging the Group’s expertise in the development of woven composite technologies and Resin Transfer Molding (RTM). Aircelle is responsible for the manufacture of the braces in its Le Havre facility in France.

Selected in 2004, Messier-Dowty is responsible for the design, development and manufacture of the main and nose landing gears for the 787 program. The 787 is the world's first commercial aircraft to benefit from composites technology on the landing gear.

*****