Safran Nacelles is ready to take flight with the COMAC C919 jetliner

On-site support for the C919's engine nacelle system is provided by the Safran Nacelles/Nexcelle team at Shanghai, China.

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Safran Nacelles has enhanced its Shanghai, China team that supports the C919 jetliner program, preparing for the flight testing and industrialization of this aircraft equipped with a new-generation integrated propulsion system incorporating the company's innovative O-Duct thrust reverser.

The reinforcement steps include transfer of the C919 nacelle's project manager position from Safran Nacelles' headquarters in Le Havre, France to Shanghai – where the aircraft is assembled by the Commercial Aircraft Corporation of China (COMAC). An additional Safran Nacelles engineer from France will be assigned to Shanghai beginning in June, providing on-site leadership for flight test activities.
Equipped with nacelle systems that integrate Safran Nacelles’ O-Duct thrust reverser, the no. 1 C919 jetliner performed ground runs at Shanghai’s Pudong International Airport prior to its maiden flight.

In addition, Chinese nationals working for Safran Nacelles at Shanghai have assumed new responsibilities in acknowledgement of their performance in supporting the C919 nacelle system during the past seven years.

"Based on their significant program contributions, we are now giving industrial and technical leadership duties to our Chinese colleagues here in Shanghai," explained Manuel Rodriguez Arenas, a Safran Nacelles employee who has been Nexcelle's On-Site Nacelle Architect and Integration Leader in Shanghai.

With the Shanghai team's latest reinforcement, Rodriguez Arenas is now assigned the role of Safran Nacelles' C919 project manager – the first time such program responsibility has been located outside of the company's French headquarters.

**Safran Nacelles' pioneering O-Duct thrust reverser**

Nacelle systems for the twin-engine C919 were developed in the Nexcelle joint venture of Safran Nacelles and GE Aviation's Middle River Aircraft Systems (MRAS), and their design incorporates the new O-Duct thrust reverser concept pioneered by Safran Nacelles. These nacelle systems equip the C919's two LEAP-1C turbofan engines, produced by the CFM International 50/50 joint company of GE and Safran Aircraft Engines.

Rodriguez Arenas said COMAC and CFM International have acknowledged the Safran Nacelles/Nexcelle team's commitment during completion of the no. 1 C919 and the preparations for its imminent first takeoff.

"In particular, our young and very motivated Chinese employees have responded whenever called upon," he said. "As one recent example, three team members cancelled family plans during the all-important Chinese New Year holiday in January to remain at Shanghai for pre-flight preparations. And earlier this month, our personnel worked from Friday through Sunday to complete a critical task on the O-Duct system."

**O-Duct thrust reverser deployment in C919 taxi tests**

Rodriguez Arenas also highlighted "the involvement of both the U.S. and France home teams that maintain a close collaboration with their Chinese colleagues, regardless of the time zone differences."

He noted the C919's O-Duct thrust reverser has served its purpose during the jetliner's high-speed ground runs at Shanghai's Pudong International Airport. They culminated last weekend when the aircraft's nosewheel raised from the runway for the first time – followed by the O-Duct thrust reverser's deployment for the aircraft's deceleration.

"After this high-speed test, the COMAC pilots expressed their satisfaction with the O-Duct's performance, and the C919 was approved for its maiden flight," Rodriguez Arenas added.

The C919 marks a first use of Safran Nacelles’ innovative O-Duct thrust reverser – which reduces weight, increases thrust reverser efficiency and facilitates engine maintenance. It also contributes to improving overall maintenance for the LEAP-1C propulsion system, resulting from easier access to the powerplant's engine core and the thrust reverser components.