Safran celebrates first flight of C919 as major partner to planemaker Comac

Safran is celebrating today the first flight of the C919, the first mainline commercial jet (over 100 seats) designed and built by Chinese planemaker Comac.

Safran is one of the major partners on this program, as supplier of the complete propulsion system, comprising the LEAP-1C engine from CFM International*, and the nacelle and thrust reverser, built by Nexcelle**. Safran also supplies the C919’s electrical wiring interconnection system (EWIS), via SAIFEI Aviation EWIS Manufacturing Co. Ltd.***.

COMAC was the first aircraft manufacturer to choose the LEAP engine, successor to the CFM56, as the sole Western powerplant on its first single-aisle commercial jet, the C919. The LEAP offers airlines a 15% reduction in fuel consumption and CO2 emissions (compared with previous-generation engines), along with a 50% decrease in NOx (oxides of nitrogen) emissions, while also meeting the most stringent noise standards. Offering outstanding technical, economic and environmental performance, the LEAP engine has recorded the fastest order rate in the history of commercial aviation. It has logged over 12,230 orders and commitments worldwide to date, including 1,000 for the C919.

The engine's nacelle is made of 60% composite materials. Its thrust reverser features a single-piece O-duct design, a new architecture that improves the aerodynamic qualities of the propulsion system, thus contributing to the lower fuel consumption. This thrust reverser is the first based on this innovative concept to be certified anywhere in the world.

"Today's first flight symbolizes our successful collaboration with the Chinese aviation industry, and is the result of Safran's long-standing commitment to the country," said Philippe Petitcolin, Chief Executive Officer of Safran. "It also marks a major milestone for China's fast growing aviation industry. Safran is all the more proud of its role in this historic event because Comac was the first planemaker to select the LEAP."

Safran has operated in China for more than 100 years, and has created a number of partnerships with key industry players, including AVIC and Comac. CFM International has become a leading supplier in this market, with more than 5,000 engine orders and commitments from China, and over 1,000 LEAP-1C engines on order worldwide. Safran provides engines and autopilots for more than half of all helicopters in China, while some 40% of the jetliners operating in the country use landing gear or brakes designed by Safran. Furthermore, Safran now has over 1,800 employees in China, working for 20 different entities.
SAFRAN'S ROLE ON THE C919

LEAP(1) ENGINES
- 15% REDUCTION IN FUEL CONSUMPTION AND CO, EMISSIONS(2)
- 50% REDUCTION IN NOx EMISSIONS(3)

NACELLES(4)
- 50% LESS ENGINE NOISE, THANKS TO THE NACELLE
- 60%+ OF NACELLE MADE OF COMPOSITE MATERIALS

WIRING(5)
- 52 KMS OF WIRING (32 MILES)
- 725 WIRING HARNESSES

PROGRAM MILESTONES

- DECEMBER 21, 2009
  LEAP PROPULSION SYSTEM (ENGINE + NACELLE) CHOSEN FOR THE C919

- FEBRUARY 24, 2011
  SAFRAN AND COMAC CREATE JOINT VENTURE FOR AIRCRAFT WIRING, SAIFEI

- JULY 2015
  DELIVERY OF FIRST PROPULSION SYSTEM TO CONAC

- DECEMBER 2016
  PROPULSION SYSTEM CERTIFIED BY EASA AND FAA

- MAY 2017
  FIRST FLIGHT OF THE C919, FITTED WITH THE LEAP PROPULSION SYSTEM

(1) LEAP, the successor to the CFM56, is developed, produced and marketed by CFMI International, a 50/50 joint company between Safran Aircraft Engines and GE.
(2) Compared with previous generation engines.
(3) Versus CASM's standard.
(4) Via Nacelle, a 50/50 joint company between Safran Nacelles and MRAS (GE Aviation).
(5) Via Saifei, a joint venture between Comac (51%) and Safran Electrical & Power (49%).
Safran

*CFM International is a 50/50 joint company between Safran Aircraft Engines and GE.
** A joint venture created in 2012 by Safran Electrical & Power and Shanghai Aircraft Manufacturing Co. (COMAC)
***A joint venture between Safran Nacelles and GE (MRAS)