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

Shanghai, May 5, 2017. 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 CO₂ EMISSIONS

**NACELLES(4)**
- 50% LESS ENGINE NOISE, THANKS TO THE NACELLE
- 50% REDUCTION IN NOₓ EMISSIONS

**WIRING(5)**
- 52 KMS OF WIRING (32 MILES)
- 725 WIRING HARNESS

**PROGRAM MILESTONES**

- **DECEMBER 21, 2009**: LEAP PROPELLION SYSTEM (ENGINE + NACELLE) CHOSEN FOR THE C919
- **FEBRUARY 24, 2011**: SAFRAN AND COMAC CREATE JOINT VENTURE FOR AIRCRAFT WIRING, SAIFER
- **JULY 2015**: DELIVERY OF FIRST PROPELLION SYSTEM TO COMAC
- **DECEMBER 2016**: PROPULSION SYSTEM CERTIFIED BY EASA AND FAA
- **MAY 2017**: FIRST FLIGHT OF THE C919, FITTED WITH THE LEAP PROPELLION SYSTEM

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(1) LEAP: the successor to the CFM56, is developed, produced and marketed by CFM International, a 50/50 joint company between Safran Aircraft Engines and GE.
(2) Compared with previous-generation engines.
(3) Versus CASM’96 standard.
(4) Via Nacelles, a 50/50 joint company between Safran Nacelles and MRAS (GE Aviation).
(5) Via Saifé, 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)

Safran is a leading international high-technology group with three core businesses: Aerospace, Defence and Security (ongoing divestiture of Security business). Operating worldwide, the Group has 66,500 employees (Security included) and generated sales of 15.8 billion euros in 2016 (excluding Security). Working independently or in partnership, Safran holds world or European leadership positions in its core markets. The Group invests heavily in Research & Development to meet the requirements of changing markets, including expenditures of 1.7 billion euros in 2016 (excluding Security expenditures). Safran is listed on Euronext Paris and is part of the CAC40 index, as well as the Euro Stoxx 50 European index.

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