

## **NEWS RELEASE**

Celebrating CFM LEAP year: keeping the promise

- More than 10,800 orders on the books from nearly 100 customers worldwide
- Fastest-selling engine in commercial aviation history
- Ready for entry into service in the coming weeks

FARNBOROUGH — 11 July 2016 — Leap year comes around every four years, but an advanced technology product with industry-leading fuel efficiency and world-class reliability like CFM International's LEAP engine only comes along once in a generation.

As the engine stands on the verge of entering commercial service, the LEAP program is delivering on all of its commitments.

"The LEAP development and flight test programs have been incredibly smooth, thanks to the preparation, hard work, and the experience of our team," said Allen Paxson, executive vice president of CFM International. "The LEAP-1A, -1B, and -1C engines are each meeting our performance specifications. We have been conducting intense flight-test campaigns with Airbus and Boeing, as well as on our own flying testbeds since late 2014. During all of this testing, the engines have performed flawlessly."

The LEAP-1A was certified in November 2015 and the LEAP-1B achieved joint U.S. FAA and European EASA certification in May of this year. Overall, the entire program has logged more than 11,000 hours since the first engine went to test in September 2013. The LEAP-1A is on schedule to enter commercial service in the coming weeks on the Airbus A320neo; first deliveries of the LEAP-1B on the 737 MAX are scheduled to begin in 2017. The LEAP-1C is scheduled for first flight on the COMAC C919 in late 2016.

"The success of the LEAP program didn't just happen," said François Bastin, executive vice president of CFM International. "It is the result of years of planning and a meticulous process of testing and maturing individual technologies before we put them in the engine; we began component and rig tests four years before our first full engine test.

"It also comes from listening to our customers and understanding that reliability is not optional when your business model requires eight to 10 flights per day. They depend on the world-class reliability of their CFM56 fleets today and expect nothing less from their LEAP engines tomorrow."

The advanced technology that makes up the LEAP engine family will result in a highly reliable, fuel-efficient powerplant for the new Airbus A320neo (new engine option), Boeing 737 MAX, and COMAC C919. The engine incorporates

many industry firsts, including the 3-D woven carbon fiber composite fan blade and case; the one-of-a-kind debris rejection system; fourth-generation 3-D aerodynamics; the first commercial use of ceramic matrix composites (CMCs); the revolutionary combustor design featuring fuel nozzles grown using additive manufacturing; and light-weight Titanium Aluminide airfoils. The lower weight and higher durability these components provide will result in a 15 percent improvement in fuel efficiency, with an equivalent reduction in CO2 emissions; a 50 percent margin CAEP/6 emissions regulations; a dramatically lower noise signature; and CFM's industry-leading reliability and low overall operating costs.

## About CFM International

LEAP engines are a product of CFM International, a 50/50 joint company between GE and Safran Aircraft Engines. CFM is the world's leading supplier of commercial aircraft engines, and the LEAP engine has become the preferred choice for next-generation single-aisle aircraft with more than 10,800 orders received through June 2016. For more information concerning CFM, visit us on the Web at <u>www.cfmaeroengines.com or</u> follow us on Twitter @CFM engines

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