

# Eaton's Oil Debris-Monitoring Technology Selected for Revolutionary LEAP Engine



Jet-engine manufacturer Snecma, headquartered in Courcouronnes, France, recently selected Eaton's oil debris-monitoring technology for the revolutionary new Leading Edge Aviation Propulsion (LEAP) engine. The contract value is expected to exceed \$100 million over the life of the program, or through 2032 and possibly beyond.

The LEAP-1C, selected by COMAC of China in December 2009 to power the new C919 single-aisle jetliner, will be the first member of the LEAP engine family. It is slated to be certified

in 2014. The LEAP-1A engine was also selected by Airbus in December 2010 as part of its offering for the new A320neo (new engine option). The new airplane/engine combination could enter commercial service by spring 2016. The LEAP-1B engine was selected by Boeing in August 2011 as the exclusive engine for the B737 MAX re-engine program which could enter commercial service in 2017.

## **Eaton's Advances in Next-Generation Aircraft Products**

"Our innovations through the years have established Eaton as an

industry leader in the growing engine prognostics market, and the LEAP contract validates the advancements we've made to develop solutions for next-generation aircraft," said Uday Yadav, president of Eaton's Aerospace Group.

LEAP is a new baseline turbofan engine designed to power the next generation of single-aisle commercial jets. Featuring the industry's most innovative materials and technologies, LEAP will deliver breakthrough performance in fuel efficiency, cost savings and emissions reduction, and also will

be significantly quieter than its predecessors.

## **System Enhances Engine Health and Aircraft Safety**

Eaton's advanced oil debris-monitoring system enhances engine health and aircraft safety by capturing, retaining and analyzing oil debris particles to determine if critical engine component failures are imminent.

Eaton's technology has evolved along with the aerospace industry's demand for lighter, more fuel-efficient aircraft. Eaton has led efforts to



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develop low-pressure debris-monitoring systems that use less energy, operate more efficiently and improve fuel economy and reliability.

Eaton's oil debris-monitoring technology also has been selected for GE90, GP7200, GENx, Trent 1000 and Trent XWB jet engine programs.

Eaton's technology also saves money by reducing the airplane maintenance burden. Engines equipped with Eaton's debris-monitoring system eliminate the need for manual checks and inspections and enable condition-based maintenance, a more cost-effective alternative that increases a plane's time in the air during its life span.

### **Multiple Benefits Make Eaton Technology "A Great Selling Point"**

"Eaton provides oil debris-monitoring products for most of the industry's commercial airplane business, and our work also has applications in gas turbines for cogeneration plants, oil platform pumping stations, mining, and other industries," said Steve Showalter, chief engineer at Eaton's aerospace facility in Glenolden, Pennsylvania, and originator of three Eaton patents related to oil debris monitoring. "Our technology helps improve reliability, provides maintenance credits and increases flight safety. When you supply a product that can do all those things, it's a great selling point."



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LEAP technologies will deliver improvements beyond anything brought to market to date. Fuel efficiency will improve by 15 percent, nitrogen oxide emissions will be cut by 50 percent and noise reduced.