ZEROAVIA & TEXTRON AVIATION - DEVELOPMENT OF HYDROGEN-ELECTRIC POWERTRAIN FOR CESSNA GRAND CARAVAN

News / Business aviation, Manufacturer

ZeroAvia entered into a non-exclusive Joint Development Agreement with Textron Aviation supporting ZeroAvia development of hydrogen-electric, zero-emission powertrains for the Cessna Grand Caravan (208B) aircraft. ZeroAvia will obtain a Supplemental Type Certificate to retrofit the Grand Caravan single-engine utility turboprop with the ZA600 zero-emission powertrain, targeting commercial passenger and cargo operators.

Cessna Grand Caravan high-wing design makes it a strong candidate for mounting hydrogen fuel tanks under the wings, ensuring operators can maintain seat capacity or cargo space, while transitioning to true zero emission propulsion systems. ZeroAvia will develop its ZA600 powertrain system for the Grand Caravan with data, engineering and certification support provided by Textron Aviation. ZeroAvia aims to obtain certification for the 600kW powertrain as early as 2025, enabling customers to operate zero-emission flights.

The Cessna Grand Caravan platform has seen more than 2,400 aircraft delivered worldwide since the aircraft was introduced, representing enormous potential for a shift to clean propulsion. ZeroAvia has already announced several agreements with operators and lessors in relation to

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conversions of the Grand Caravan.

Val Miftakhov, CEO, ZeroAvia, commented: “The famous Cessna Grand Caravan is on track to be one the first airframes operating commercial services - both cargo and passenger - with hydrogen-electric, zero-emission engines. We applaud the visionary leadership of Textron Aviation in joining us to help transform a much-loved mainstay of sub-regional aviation into a symbol of sustainable transformation in aviation.”

This agreement with Textron Aviation adds to significant prio commitments from other aircraft original equipment manufacturers and operators to ZeroAvia’s powertrain technology over the course of the last few months. ZeroAvia is already well advanced in retrofitting its system into a 19-seat Dornier 228 aircraft at its R&D location at Cotswold Airport in the UK, with first test flights anticipated over the next few weeks. The company is actively developing the market for its ZA600 product with different 9-19 seat airframes, while concurrently developing its ZA2000, 2-5MW engine class for 40-80 seat aircraft with an entry-into-service target of 2027.

ZeroAvia is focused on developing hydrogen-electric propulsion as a practical, holistic and economically attractive solution to aviation’s growing climate change impact. The company’s hydrogen-electric powertrains use fuel cells to generate electricity, which powers electric motors to then turn propellers. Hydrogen-electric systems produce only water vapor and at temperatures that enable the management of contrail impact.

ZeroAvia’s work in developing its 600kW system through to a certifiable design is part of the HyFlyer II project, supported by the UK Government’s Department for Business, Energy and Industrial Strategy (BEIS), Aerospace Technology Institute (ATI) and Innovate UK through the ATI Programme.

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