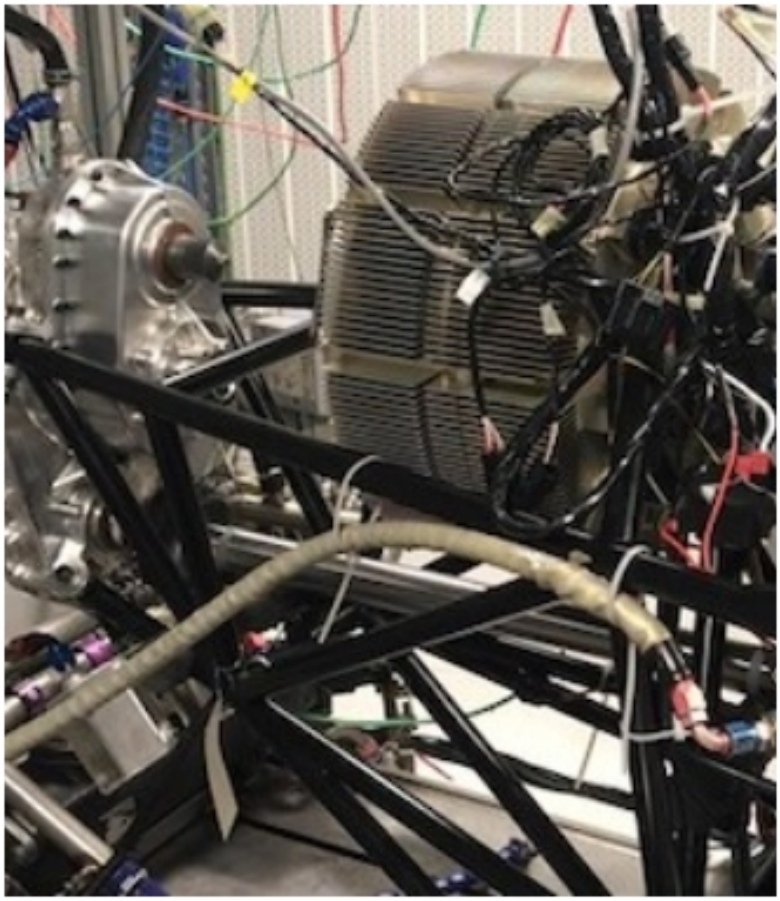
VOLTAERO INITIATES CERTIFICATION TESTING FOR THE ELECTRIC-HYBRID POWERTRAIN TO EQUIP ITS CASSIO 330 AIRCRAFT

News / Manufacturer



VoltAero has begun certification testing for the electric-hybrid powertrain to equip its Cassio 330 aircraft. Installed on a ground-based test bench, this powertrain integrates the key elements for series production Cassio 330s: Safran Electrical & Power ENGINeUS 100 smart electric motor; and Kawasaki's four-cylinder high-performance thermal engine derived from the iconic Ninja motorcycle. The Cassio 330's powertrain has a combined electric-hybrid power of 330 kilowatts, with 180 kilowatts delivered by the ENGINeUS 100 electric motor and 150 kilowatts provided by the Kawasaki thermal engine. The ground-based test bench runs of Cassio 330's powertrain are underway at the Bayonne, France facility of AKIRA Technologies.

Jean Botti, VoltAero's CEO and Chief Technology Officer commented: "Full-scale powertrain certification testing for our Cassio 330 marks another important step in VoltAero's commitment to produce a new-generation electric-hybrid aircraft family, bringing together our proprietary

powertrain with an airframe that is optimized for aerodynamic and operational efficiency.”

Botti added that VoltAero’s overall architecture for the Cassio 330 powertrain already has been validated during extensive flight testing with the company’s Cassio S testbed airplane, which is equipped with a powertrain version rated at 600 kilowatts – the most powerful electric-hybrid system of its type that is flying today. Cassio S has performed more than 230 flights since October 2020, surpassing the combined 170-flight-hour mark while covering 15,000 kilometers and visiting 40-plus airports.

VoltAero parallel electric-hybrid propulsion concept for Cassio is unique, with the aircraft using the electric motor in its aft fuselage-mounted propulsion unit for all-electric power during taxi, takeoff, primary flight (if the distance traveled is less than 150 km.), and landing. The hybrid feature – with the internal combustion engine integrated in the powertrain – comes into play as a range extender, recharging the batteries while in flight. Additionally, this hybrid element serves as a backup in the event of a problem with the electric propulsion, ensuring true fail-safe functionality.

By integrating VoltAero parallel electric-hybrid propulsion system into the company’s purpose-designed airframe, Cassio will deliver an order of magnitude higher performance as compared to the current competition, and provide significantly lower operational costs. The Cassio airframe design is based on a sleek fuselage, a forward fixed canard, and an aft-set wing with twin booms that support a high-set horizontal tail.

VoltAero’s first production aircraft version will be Cassio 330, for which the company has targeted certification in late 2025. It will be followed by the six-seat Cassio 480 with a combined electric-hybrid propulsion power of 480 kilowatts, and the Cassio 600 – sized at a 10/12-seat capacity with electric-hybrid propulsion power of 600 kilowatts.

Cassio aircraft family will be a highly capable and reliable product line for applications that include regional commercial operators, air taxi/charter companies, private owners, as well as in utility-category service for cargo, postal delivery and medical evacuation (Medevac) applications. VoltAero’s headquarters and technical offices currently are located at Médis, France. A new purpose-built facility incorporating the final assembly line for Cassio aircraft is under construction at Rochefort, France and is to be inaugurated later this year.

28 APRIL 2024

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