



FUTURE OF GENERAL AVIATION: INSIGHTS FROM ELIXIR AIRCRAFT

News / Maintenance / Trainings, Manufacturer



Elixir Aircraft sees SAF as the initial key component to make general aviation more sustainable in the near term. Elixir Aircraft's research and development has not stopped since the company was formed in the early 2010s. Their most recent announcement, at last month's Paris Air Show, was the Elixir Turbine prototype dedicated to decarbonising aviation. Developed as part of a CORAC program in collaboration with Air Liquide, Safran, Daher and Turbotech, the program aims to accelerate the launch of innovative, more environmentally-friendly aircraft powered firstly by biofuel and then by hydrogen. The Elixir prototype integrates Turbotech's SAF-burning TP90 turbine engine producing 160hp. Test flights are scheduled to take place around the end of the year.

The turbine integration is possible due to Elixir's unique airframe originally inspired by racing sailboats. Today, all Elixir aircraft are built using a proprietary Carbon Oneshot technology that simplifies the structures with no complex assemblies with rivets, glue or screws. With this simplicity, the parts are fewer and stronger. The main structure of the aircraft, for example, is made of only nine composite parts, including a single block wing of 27.82 feet.

Another French Aircraft manufacturer, Airbus, is also investing in new aviation technologies. Airbus' currently produced aircraft are 50% SAF capable. This will increase to 100% in 2030. Airbus, like Elixir, believes decarbonisation requires a such as renewing fleets with latest

generation aircraft, improving operations and infrastructure, using ASAF and implementing disruptive technologies like Hydrogen. Airbus' Flight Academy in France has ordered a new fleet of Elixir aircraft.

Elixir Aircraft co-founder Cyril Champenois commented: "Commercial aviation has been moving towards biofuels for 15 years. This high-energy-density fuel does not change engines, pilot training, maintenance or distribution methods. SAF should soon be mass-produced meaning it will be distributed to airports worldwide and available for purchase for GA customers. The team at Elixir Aircraft, like Airbus, see it to be the best current compromise for the future of its propulsion. Other technology like Hydrogen also looks very promising, but our options are open as we see what technology matures in the coming years."

The current EASA Part 23 certified Elixir aircraft powered by Rotax already reduces carbon emissions by nearly 70% compared to other old generation aircraft.

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