

Hartzell Propeller Boosts Green Flying Technology

Prop Flew on 1st Flight of Hydrogen-Powered Airliner

PIQUA, OHIO, UNITED STATES, March 27, 2023 /EINPresswire.com/ -- When Universal Hydrogen's De Havilland Dash 8 hydrogen fuel cell-powered testbed first flew earlier this month, its powertrain included a prop designed and tested for the experimental aircraft by Hartzell Propeller.

The 91-inch diameter five-blade swept airfoil carbon fiber propeller utilized derivative blades, hub and retention components from an existing 14 CFR Part 35 certified propeller. The specially designed Hartzell prop is smaller than the standard Dash 8 prop, but provided thrust to keep the aircraft airborne when the other jet fuel powered turbine engine was throttled back during first flight.



magniX-series electric propulsion system and specially designed Hartzell Propeller five-blade swept airfoil carbon fiber prop powers testbed Dash 8.

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Hartzell Propeller President JJ Frigge

“This project with Universal Hydrogen is one of many programs where Hartzell Propeller is working with and supporting advanced air mobility manufacturers. Hartzell Propeller has been around for over a hundred years, and carbon-free flight can power our next century,” said Hartzell Propeller President JJ Frigge.

“We’ve been working with this team for almost two years as we step up our investments working on future new aircraft design opportunities. Hartzell Propeller is pleased to be a part of this historic first flight of a hydrogen fuel

cell-powered regional airliner,” Frigge added.

Hartzell also customized a governor for Universal Hydrogen and continues to develop governor advancements for green-powered aircraft. In this first test flight, one of the airplane's turbine engines was replaced with Universal Hydrogen's fuel cell-electric, megawatt-class powertrain. The other aircraft engine was powered by conventional fossil fuel for safety.

Universal Hydrogen's first flight marked the largest hydrogen fuel cell-powered airplane ever to take to the skies and the largest airplane to cruise principally on hydrogen. The airplane, nicknamed Lightning McClean, flew for 15 minutes, reaching an altitude of 3,500 MSL. The flight was conducted under an FAA Special Airworthiness Certificate and the program is planned to culminate in 2025 with entry into passenger service of ATR 72 regional aircraft converted to run solely on hydrogen.

About Universal Hydrogen

Universal Hydrogen is building a hydrogen logistics network to fuel the future of aviation, today. Hydrogen is the ideal fuel for flight and will power aviation's new golden age, where planes are powered by renewables and emit nothing but water. The company's modular hydrogen capsules move over the existing freight network from production directly to the airplane anywhere in the world. Universal Hydrogen is also working to certify a powertrain conversion kit to retrofit existing regional aircraft to fly on hydrogen. The company has gathered the world's leading aviation and hydrogen talent to give the industry the option of clean flight, forever. For more info go to [Universal Hydrogen | Fueling Carbon-Free Flight](#).

About Hartzell Propeller

Hartzell Aviation's flagship company is Hartzell Propeller, the global leader in advanced technology aircraft propeller design and manufacturing for business, commercial and government customers. The company designs next-generation propellers with innovative blended airfoil technology and manufactures them with revolutionary machining centers, robotics, and custom resin transfer molding curing stations. President JJ Frigge heads the



The global leader in advanced aircraft propeller design and manufacturing technology.

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Universal Hydrogen's team of experts and the specialized Hartzell prop mated to a magniX-series electric propulsion system.

company, which is headquartered in Piqua, Ohio. For more information go to <https://hartzellprop.com>.

About Hartzell Aviation

The Hartzell Aviation name brings together an outstanding array of firewall forward companies and products under one umbrella, reinforcing the organizations' core competencies and pursuit of improving General Aviation. The storied brands of Hartzell Aviation include Hartzell Propeller, Hartzell Aerospace Welding and Hartzell Engine Tech. Hartzell Aviation is committed to innovation and the continuous improvement of General Aviation products and services. The companies are guided by the overriding principle of Built on Honor, which reflects a commitment to quality, performance and support. Hartzell Aviation's website can be found at <https://hartzellaviation.com>.

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