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Frontline Aerospace Unveils IsoCool & V-Star UAS Flight Results

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07:34 GMT, August 14, 2009 Broomfield, CO | Frontline Aerospace, Inc., announced a breakthrough engine modification for the Rolls-Royce Model 250 gas turbine code-named IsoCool – for isothermal cooling and associated V-STAR Unmanned Aerial System (UAS) subscale flight test results. "Our patent-pending IsoCool and our MicroFire products create a powerful combination for the Rolls-Royce Model 250 engine, a common engine in the UAS marketplace in addition to having the largest installed base of helicopters in the world, said Ryan S. Wood, CEO."

"We have significantly improved Model 250 engine taking it from 21% thermal efficiency to 35% saving over 40% in jet fuel and increasing shaft horsepower by 15%. With more engineering further improvements in specific fuel consumption are possible going below our current 0.39 lbs/hp-hr, said Wood."

"Victory Systems UAS uses a Rolls-Royce C20R engine and has chosen both StandardAero and Frontline's engine modifications for inclusion in their development and production offerings; this adds a significant competitive edge for our company, more power and better fuel economy, said Jay Snyder, CTO of Victory Systems."

At Heli-Expo in February of this year Frontline Aerospace, Inc. and StandardAero Limited, a Dubai Aerospace Company, announced their partnership for the joint development, testing and marketing of Frontline's MicroFire™ gas turbine recuperator product family for the Rolls-Royce Model 250 engine family.

Frontline has also successfully completed its initial flight testing of our V-STAR (Vertical Swift Tactical Aerial Resource) ¼ scale demonstrator in Colorado. The electric horizontal demonstrator met its design objectives, said Wood.

"In fact, the ¼ scale design has genuine utility as a stand-alone product. With a 12-pound payload, VTOL capable, 11.7 ft wingspan; it has all the flexibility of its larger cousin -- payload at the CG, wing morphing, low noise and landing zone flexibility. A logical propulsion choice for the ¼ scale V-STAR will be a PEM fuel cell with hydrogen since unlike virtually all unmanned aircraft designs we have extra fuselage volume, said Wood."

Frontline Aerospace, Inc has also entered into an agreement with Lucid Dimensions, maker of the Volvox Sentry™ and Volvox Hostile Fire™ spherical 3D infrared sensing (SDS). The Volvox product line is a patented spherical detection systems developed by Lucid Dimensions Inc. for real-time detecting and tracking of infrared heat signatures in three dimensions. The SDS offers distinct advantages over contemporary imaging systems, significantly enhancing three-dimensional awareness.

"The ability to fly Volvox Hostile Fire™ sensor system offers the real potential of detecting and tracking every muzzle flash and bullet on a battlefield in real-time within a 2 kilometer radius from a circling V-STAR™. This truly changes the tactical firefight," said Wood.

Joining Wood at the unveiling were Frontline directors and advisors including LtGen (ret) Timothy Kinnan, former Lockheed vice president and vice chief of plans for the Joint Chiefs of Staff; Dr. Robert M. Wood, veteran aeronautical physicist formerly of McDonnell Douglas Corporation; and MGen (ret) Thomas Eggers, consultant to Northrop Grumman, first commander of the Air Force Special Operations Command and former deputy commander of the U.S. Special Operations Command (SOCOM). "We are excited because both our Rolls-Royce Model 250 engine technology and V-STAR ™ platforms offers not only a cleantech approach to half the world's flying helicopters but a valuable VTOL UAS with long endurance, landing zone flexibility and low acoustic and IR signatures," said Wood, "but it is also appropriate for civilian missions such as disaster relief or oil platform support."