



CARTER AVIATION TECHNOLOGIES

An Aerospace Research & Development Company

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CARTER AVIATION RELEASES SLOWED ROTOR VIDEO

September 14, 2015 (Wichita Falls, Texas) – Carter Aviation Technologies, LLC (Carter) has been slowing rotors for more than a decade, which is why its CarterCopters are equipped with Slowed Rotor / Compound (SR/C™) technology. As implied by the name, the key technology underpinning CarterCopters is the ability to slow the rotor in cruise flight without requiring an infinitely variable speed transmission. Such a transmission represents a long desired capability for rotorcraft. With the rotational component of rotor drag being a function of RPM³, slowing the rotor has a very large effect on rotational drag. For example, if rotor supported flight requires 300 rpm, and the rotor can be slowed to 100 rpm in cruise (these are the rpm values seen in flight testing the PAV), this 3-fold reduction in rotor rpm corresponds to a 27-fold reduction in rotational drag, and a 5.5-fold reduction in total rotor profile drag.



CarterCopter PAV flyover at 112 rotor rpm.

“We’ve been talking about the technical aspects of slowing rotors, flying at high mu / high advance ratio for years,” explained Jay Carter. “Unfortunately all of that technical talk was lost on many folks interested in what we were doing. Historically, we have done our slowed rotor flights at altitude and did not have a camera that could adequately capture what it looks like at low rpms.” But just recently, during a demonstration flight to representatives from a major aerospace company, a cameraman was on hand to capture the much needed video. “Before we put the company’s test pilots in the aircraft, Chris Lord and I performed a demonstration of slowed rotor flight, crossing over the visiting crowd at 600 ft and a rotor rpm of 112,” exclaimed Jay Carter.

Unlike the blur of today’s helicopter rotors turning at 300 rpm or more, when a CarterCopter rotor is slowed, you can literally count the rotations. Carter has put together a video that includes the slowed rotor demonstration flying directly overhead for people to really see for the first time. “No matter how many times I’ve seen the rotor slowed in flight to around 100 rpm, I just marvel at it and the fact that it is so quiet,” said an excited Jay Carter. “We should have captured video like this years ago.” This fascinating video can be viewed at – [Carter Slowed Rotor Video](#).

About Carter Aviation Technologies, LLC.

Carter Aviation is a Wichita Falls, Texas based aerospace research and development firm that has developed and demonstrated its Slowed-Rotor/Compound (SR/C™) Technology. More information is available at www.CarterCopters.com. To discuss any of the foregoing or schedule a visit to Carter Aviation’s facilities, please contact Jeff Lewis at Jeff.Lewis@CarterAero.com.