Boeing Phantom Swift Selected for DARPA X-Plane Competition

Innovative design features fans in fuselage and wingtips to aid lift and control

ST. LOUIS, March 19, 2014 -- Phantom Swift, a prototype Boeing [NYSE: BA] initially built in less than a month, has been accepted to be part of the Defense Advanced Research Project Agency (DARPA) Vertical Takeoff and Landing (VTOL) X-plane program.

DARPA is trying to mature a new aircraft configuration capable of both efficient hover and high-speed cruise.

"Proving these capabilities in a single aircraft has been the holy grail for tactical military aviation," said Dan Newman, Boeing Phantom Works Advanced Vertical Lift capture team lead. "We're confident that Phantom Swift could be the solution."

Through a $17 million agreement with DARPA's Tactical Technology Office, Boeing intends to continue developing its technology for an aircraft that takes off and lands vertically, hovers and efficiently flies at speeds up to 400 knots.

"Designing an aircraft to perform a vertical takeoff, while maintaining adequate low-speed control, is challenging. Sustaining efficient hover is also difficult, and adding a high cruising speed is even more challenging," Newman added.

After a 22-month effort involving several competitors, DARPA plans to select a model for fabrication and flight demonstration.

Phantom Swift features two large lift fans – inside the fuselage – that provide efficient vertical lift. Once the aircraft transitions to cruise mode, the fans are covered. It also features smaller ducted fans on the wingtips that provide forward thrust, and provide additional lift and control in hover.

Last year, Phantom Works used rapid prototyping and additive manufacturing techniques, such as 3-dimensional printing, to quickly design, build and fly a scaled-down Phantom Swift.

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A Phantom Swift feature story and video are online at
http://www.boeing.com/boeing/Features/2013/09/bds_phantom_swift_09_11_13.page

B-roll video of Phantom Swift is available to media through the contacts below.

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Additional assets available online: Photos (1)