Boeing JSF X-32B Completes First Vertical Landings

The Boeing Joint Strike Fighter X-32B short-takeoff-and-vertical-landing (STOVL) aircraft reached another major milestone today by completing the JSF program's first vertical landings following transition from conventional to STOVL flight.

With the two landings, accomplished on the X-32B's 49th and 51st flights, Boeing completed the government vertical landing requirement for the JSF program.

Boeing now has completed more than 70 percent of the X-32B's flight-test requirements since the aircraft's first flight in March.

After a conventional takeoff, Boeing lead STOVL test pilot Dennis O'Donoghue re-directed the X-32B's engine thrust from the cruise nozzle to its lift nozzles and then decelerated to a hover 150 feet above the ground. Once stabilized in the hover, O'Donoghue descended the plane to 50 feet, maneuvered over the center of the hover pit and landed vertically. The aircraft was then refueled and following another conventional takeoff, transitioned to a hover and landed vertically on the hover pad.

"I couldn't be more proud of the X-32B's performance - the plane responded exactly as I expected," O'Donoghue said. "Transition to STOVL flight was smooth, and flying qualities, hover and vertical landing performance mirrored our predictions."

"This is another tremendous accomplishment and the latest in a long list of firsts Boeing and its One Team have racked up since the X-32B's first flight in March," said Phil Condit, Boeing chief executive officer.

Today's vertical landing came just three days after the X-32B completed four hovers during five flights on June 24. Together, these flights demonstrate the aircraft's robustness and the reliability of the Boeing direct-lift system.

Frank Statkus, Boeing vice president and JSF general manager, said the vertical landings are the biggest step toward the successful completion of all of the customer's STOVL requirements.

"We've definitely demonstrated to our customer the simplicity, reliability and low-risk aspect of our STOVL system, including our ability to easily transition to and from STOVL flight," Statkus said. "Involvement of the customer, United Kingdom STOVL testers, as well as One Team members including engine supplier Pratt & Whitney and STOVL component supplier Rolls Royce, has been critical to our success."

Next, government STOVL pilots will fly the X-32B for additional vertical landings. Following completion of all customer requirements, Boeing will complete its own company objectives.

Besides simplicity and low pilot workload, other significant advantages of the company's third-generation direct-lift system are low maintenance and safety.

"Reducing maintenance is extremely important to the military services, particularly from a life-cycle cost standpoint, and our reliable, safe, proven system fits the bill," Statkus said. "We're improving - not inventing - which will guarantee the lowest technical and cost risk going into the next phases of the program."

Statkus said it is important to note that extensive ground environment tests conducted on the X-32B in late March confirmed the aircraft's STOVL system operates at acoustic and temperature levels lower than predicted at full power. "The testing verified we meet all requirements and provide a safe operating environment for the customer," he said.

The X-32B is validating the Boeing direct-lift approach to the STOVL requirements for the Marine Corps and the United Kingdom's Royal Navy and Royal Air Force. Underscoring the commonality of its JSF design, Boeing is using two aircraft to demonstrate requirements for the U.S. Air Force, Navy, Marine Corps, U.K. Royal Navy and Royal Air Force in the concept-demonstration phase of the JSF program.

The Boeing X-32A aircraft - with no service-specific modifications -demonstrated both aircraft-carrier and conventional-takeoff-and-landing objectives. The X-32A completed its flight-test program Feb. 3 after 66 flights and 50.4 flight hours with six different pilots at the controls.

Boeing is competing to build the JSF under a four-year U.S. Air Force, Navy and Marine Corps concept demonstration contract, while also defining the design for the operational JSF. A competition winner is scheduled to be selected later this year.

To read about the X-32B's first hover go to this news release.

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