JSF X-35B Powers Up Engine, Begins Final Phase Of Flight Test

The short-takeoff/vertical landing (STOVL) version of the Lockheed Martin Joint Strike Fighter, the X-35B, has begun ground runs as the countdown begins to the aircraft's final phase of STOVL flight.

The plane completed its conventional and STOVL wing-borne flight requirements last fall and will begin STOVL takeoff and landing operations, beginning with vertical takeoffs, in late June or early July.

The Lockheed Martin JSF team completed installation of the JSF X-35B's flight-ready propulsion system -- including the shaft-driven lift fan and engine -- on May 12. Pilot Simon Hargreaves began operating the flight-ready system in the aircraft on May 24.

"The X-35B continues to be in excellent shape. All final evaluations and flight preparation are meeting all our expectations," said Rick Rezabek, Lockheed Martin X-35B product manager. "The STOVL portion of the flight-test program will prove to be an incredible finish to the JSF X-airplane test program."

Additionally, the government JSF Program Office completed a first-flight readiness review of the X-35B on May 22 and 23 in preparation for the beginning of STOVL flight testing. Engineering groups from the JSF Program Office, an independent review team and a Joint United States Air Force/U.S. Navy/U.S. Marine Corps Safety Review Board met with the Lockheed Martin-led X-35 team to review engineering and test results of all X-35B STOVL development work, as well as plans for the STOVL flight-test program.

Flight test will begin with a series of vertical takeoffs at the Lockheed Martin plant in Palmdale, Calif. Follow-on flights will include transitions to and from conventional and STOVL modes. Hargreaves, a veteran Harrier pilot from BAE SYSTEMS, will be the X-35B's principal contractor test pilot.

The X-35B, designed to meet U.S. Marine Corps and Royal Navy/Royal Air Force requirements, features a unique propulsion system in which a drive shaft from the engine turns a counterrotating lift fan that produces tremendous cool-air lifting force during STOVL operations. The front-mounted fan works in concert with a thrust-vectoring rear engine nozzle and under-wing lateral- control nozzles to produce nearly 40,000 pounds of lifting power. Rolls-Royce produces the fan and nozzles. The Pratt & Whitney engine is based on the F-22 power plant.

The shaft-driven lift fan system recently completed government-monitored durability mission tests, demonstrating complete reliability.

The Lockheed Martin approach to the flight-test program is based on fielding and flying a JSF design as close to the production model as possible.

"By flight-testing an aircraft that closely represents the one you intend to produce, and by validating that aircraft's performance, you greatly reduce the risk of encountering unexpected and costly surprises later in the program," said Harry Blot, a former Harrier test pilot who now serves as vice president and deputy program manager for the Lockheed Martin JSF.

Lockheed Martin, in partnership with Northrop Grumman and BAE SYSTEMS, is in competition to build the JSF for the United States and United Kingdom. Government selection of a single contractor for the Engineering and Manufacturing Development phase is set for fall 2001.

High-resolution photo available: http://www.lmaeronautics.com/image_gallery/pr_photos/jsfpr_photos/jsf_1stfligh t/jsfpr_pr358326a.html

For photos and information on the JSF and Lockheed Martin Aeronautics Company, visit: http://www.lmaeronautics.com/.

For government information on the Joint Strike Fighter program, visithttp://www.jast.mil/.

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