Lockheed Martin F-35 Fighter Achieves Another Milestone: In-Flight Operation Of Integrated Avionics Aboard 'CATBird'

Lockheed Martin's Cooperative Avionics Test Bed, or "CATBird," has begun in-flight integration and verification of the F-35 Lightning II mission systems suite, launching another stage of risk reduction for the world's newest fighter.

The CATBird, a highly modified 737 airliner, will test the avionics suite thoroughly for several months before the complete system begins flying in an F-35 aircraft. The entire F-35 avionics system is slated for airborne testing in the CATBird in 2009.

"The F-35 mission systems suite is the most sophisticated and powerful avionics package of any fighter in the world," said Dan Crowley, Lockheed Martin executive vice president and F-35 program general manager. "The CATBird is a shared industry and government investment that continues our risk- reduction work as we prove that the F-35's advanced avionics work as advertised, three years before the first F-35 goes operational. This is the start of what will no doubt be an exciting period of validation and confidence building regarding the capabilities of this 5th generation, multi-role, multi- service aircraft."

The F-35's avionics include on-board sensors that will enable pilots to strike fixed or moving ground targets in high-threat environments, day or night, in any weather, while simultaneously targeting and eliminating advanced airborne threats.

The CATBird's 40th flight, on Tuesday, Nov. 25, was its first configured as a complete classified mission systems laboratory. All test objectives were met in the 2.4 hour sortie.

"We were able to transmit using the radar for 23 minutes and selected six different TACAN (tactical control and navigation) stations, with data displayed on the F-35 cockpit that resides in the CATBird," said Eric Branyan, Lockheed Martin vice president of F-35 Air System Development. "The results matched our predictions."

The first Lightning II aircraft to fly with the full avionics package will be a short takeoff/vertical landing F-35B, called BF-4. All previous F-35 test aircraft are "flight sciences" aircraft, designed to validate the fighter's aerodynamic performance. BF-4 is the first F-35 "mission systems" aircraft and is scheduled to make its first flight in mid-2009.

The F-35 is a supersonic, multi-role, 5th generation stealth fighter. Three F-35 variants derived from a common design, developed together and using the same sustainment infrastructure worldwide will replace at least 13 types of aircraft for 11 nations initially, making the Lightning II the most cost- effective fighter program in history.

Lockheed Martin is developing the F-35 with its principal industrial partners, Northrop Grumman and BAE Systems. Two separate, interchangeable F-35 engines are under development: the Pratt & Whitney F135 and the GE Rolls-Royce Fighter Engine Team F136.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 140,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation reported 2007 sales of $41.9 billion.

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