## Lockheed Martin F-35 CATBird Shows Key Avionics Capability, Reliability At Edwards Air Force Base

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The Lockheed Martin Joint Strike Fighter Cooperative Avionics Test Bed ("CATBird") aircraft recently completed a two-week deployment to Edwards Air Force Base, Calif., where it demonstrated the robust qualities of avionics systems being developed for the F-35 Lightning II.

The deployment included successful airborne testing of the F-35 Lightning II radar, electronic warfare and communications/navigation/identification systems and more than 2.8 million lines of mission systems flight software. The testing reduces hardware and software risks that cannot be retired in ground laboratories and individual sensor test beds before testing of the first mission systems equipped F-35 aircraft later this year.

CATBird, a highly modified 737 airliner equipped with the integrated F-35 mission systems suite, left for Edwards on April 14 and returned to Lockheed Martin's Fort Worth plant as planned on April 24. During the deployment, CATBird conducted 10 mission systems test flights successfully evaluating the radar, CNI, and EW infrastructure and sensor function.

The joint industry/government F-35 Integrated Test Force at Edwards AFB provided logistic support, ranges, and ground and air targets.

"Performance of the aircraft infrastructure and on-board sensors exceeded my expectations and gives the test team added confidence that we are on track to fly the first mission systems F-35 aircraft this summer," said Doug Pearson, Lockheed Martin vice president of the F-35 Integrated Test Force. "The deployment was superbly supported by the Air Force Flight Test Center."

Airborne avionics testing aboard the CATBird and other flying test beds is under way concurrently with ongoing validation in ground-based laboratories that has amassed tens of thousands of hours of testing time.

The F-35 will have the most comprehensive and powerful avionics suite of any fighter in history, with a Northrop Grumman active electronically scanned array radar, electro-optical distributed aperture system and CNI system; a Lockheed Martin electro-optical targeting system; a BAE Systems electronic warfare system; and other advanced systems providing information that is totally integrated before being presented to the pilot on a VSI helmet-mounted display and a touch-screen glass cockpit display.

The F-35 is a supersonic, multi-role, 5th generation stealth fighter. Three 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.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 146,000 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 2008 sales of \$42.7 billion.

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