New Lockheed Martin F-35A Will Test Weapons

The seventh Lockheed Martin F-35 Lightning II flight test aircraft took to the skies for the first time today, with the overall objective of validating the F-35A conventional takeoff and landing (CTOL) variant's weapons suite.

(Photo: http://www.newscom.com/cgi-bin/prnh/20100420/LA90347)

The jet, known as AF-2 and piloted by Lockheed Martin F-35 Test Pilot Jeff Knowles, took off at 5:27 p.m. CDT from Naval Air Station Fort Worth Joint Reserve Base and flew for 1 hour and 23 minutes.

"The first flight of AF-2 is a significant achievement for the F-35 program, the U.S. Air Force and our international partners who will operate the F-35A," said James "Sandy" Sandstrom, Lockheed Martin's F-35 U.S. Air Force program manager. "This aircraft is configured to test and verify the multiple weapons loads that will deliver 5th generation combat capability to the warfighter."

AF-2 will be used to verify the F-35A's ability to carry both internal and external weapons throughout the required flight envelope. The jet is also the first F-35 to have the internal GAU-22/A 25-millimeter gun system installed. The system, featuring a four-barrel Gatling gun which fires at a rate of 3,000 rounds per minute, is made by General Dynamics Armament and Technical Products in Burlington, Vt.

Gun testing on AF-2 will be used to confirm predictions of gun vibration, acoustic and recoil loads with the aircraft and various weapons. Additionally, the aircraft will be used to confirm vibro-acoustic loads with the weapons-bay doors open and closed with various weapon configurations. The measurements will validate the structural design of the jet, and provide evidence of the F-35A weapons' compatibility with gunfire and weapons-bay environments.

Supersonic launch of internal weapons, including maximum-speed (Mach 1.6) launch of internal air-to-air missiles, is a feature of all F-35s. An internal-weapons-only configuration is used when Very Low Observable stealth is required to complete a mission. When VLO stealth is not required, more than 15,000 pounds of additional ordnance can be loaded onto six external pylons.

F-35 test aircraft are supported by the F-35 Autonomic Logistics Information System (ALIS) and managed by the Lockheed Martin F-35 Sustainment Operations Center in Fort Worth. ALIS is the worldwide support system reporting and recording the prognostics and health of all F-35s around the globe to ensure mission readiness.

The F-35 Lightning II is a 5th generation fighter, combining advanced stealth with fighter speed and agility, fully fused sensor information, network-enabled operations, advanced sustainment, and lower operational and support costs. 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 2009 sales of $45.2 billion.

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