Lockheed Martin - Boeing Raptor 4004 Flies For The First Time

The F-22 Program met a major milestone today with the first flight of Raptor 4004, the first F-22 to fly with advanced avionics hardware and integrated software aboard.

(Photo: http://www.newscom.com/cgi-bin/prnh/20001115/ATW022)

"Today's flight of the initial avionics software package helps keep the F-22 program on track for delivery of an even more advanced software package, Block 3.0, prior to the end of the year," said Tom McDermott, manager of the F-22 program's Avionics team.

Lockheed Martin test pilot Bret Luedke was at the controls during the 37-minute flight, which accomplished a critical Defense Acquisition Board criterion. Raptor 4004 will undergo additional flight testing at Marietta before joining the F-22 program's flight test fleet at Edwards AFB, Calif., later this year.

Prior to first flight, ground testing of Raptor 4004's avionics was completed at Lockheed Martin Aeronautics Company's facilities in Marietta, Ga. LM Aero is responsible for overall leadership of the program's avionics team, which includes engineers from LM Aero in Fort Worth, Texas, the Boeing Company in Seattle, Wash., and 11 major subsystem suppliers from across the country.

Boeing is responsible for integrating the F-22's avionics hardware and software systems at their Avionics Integration Lab (AIL) in Seattle. The initial avionics flight test software package, called Block 1.2, includes stores management, vehicle management system, utilities and subsystems, radar, mission software, inertial reference system, pilot vehicle interface and cockpit display software.

The advanced Block 3.0 software has been flight-tested aboard the Boeing Flying Test Bed (FTB), a modified Boeing 757, since September. "It is on schedule to be delivered to Lockheed Martin in November for a December F-22 flight," said Mike Harris, Boeing F-22 Avionics Manager. "The Block 3.0 software will allow flight testing of multi-sensor fusion for the first time in a fighter."

As one of several criteria that must be accomplished before the Department of Defense will authorize the Air Force to begin initial production of the F-22, the Pentagon requires the program to fly a Raptor with Block 3.0 software aboard by the end of the year.

Lockheed Martin, Boeing and Pratt & Whitney have joined with the U.S. Air Force to develop and produce the revolutionary F-22, which is slated to be operational in late 2005. The world's first stealth air-to-air fighter, the F-22 will be virtually unseen on radar, deadly at long range and unmatched at close-in dogfighting. As a true multimission fighter, it will also have superb, precision-strike ground attack capability. A multimode electronically scanned radar, internal weapons carriage, vectored thrust and a sophisticated fully integrated sensor array are only some of the revolutionary advantages that Raptor brings to the air combat arena.

The Raptor will carry existing and planned air-to-air weapons, including a full complement of AIM-120 advanced medium-range air-to-air missiles (AMRAAM) and AIM-9 Sidewinder short-range missiles, along with an internal M61A2 Vulcan 20mm cannon. Multimission air-to-surface weaponry includes the new GBU-32, 1,000-lb joint direct attack munition (JDAM) for precision, all-weather attack.

The F-22 is proving itself today through a rigorous flight test program in the skies above Edwards Air Force Base, Calif., and the results have been outstanding. Air Force and F-22 Contractor Team test pilots are putting the Raptor through its paces, and the aircraft, engines and avionics will be thoroughly tested before the F-22 enters active duty.

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