

# Lockheed Martin F-22 Raptor Validates Quantum Leap In Capability Of 5TH Generation Fighters, Continues Unprecedented Operational Successes

The Lockheed Martin F-22 Raptor 5TH generation air dominance fighter continues to compile an overwhelming record of performance and reliability since entering operational service with the U.S. Air Force 18 months ago, based on data that includes statistics and reactions from pilots, commanders and maintainers.

"Joint and allied force commanders talk about the commanding presence of the F-22 and how the Raptor makes everyone in the battlespace better," said Lockheed Martin Aeronautics Executive Vice President and F-22 Program General Manager Larry Lawson, at the 2007 Paris Air Show. "Pilots will tell you about the quantum leap in situational awareness the Raptor provides, and maintainers are amazed at how much easier it is to keep the F-22 in the air, day-in and day-out in any environment. That is the level of performance and reliability the F-22 is delivering today."

Lawson said the F-22 has recorded several major milestones over the past year including its first overseas deployment and the first participation by a Raptor unit at Red Flag, the Air Force's highly realistic combat training exercise.

In early May, a dozen F-22s and more than 250 personnel from the 1st Fighter Wing's 27th Fighter Squadron returned to their base at Langley Air Force Base, Va., after a 90-day deployment to Kadena Air Base, Japan. More than 670 sorties were flown during the deployment, which proved the Air Force's worldwide reach with the Raptor. The 27th FS pilots flew sorties with both U.S. and allied forces during the deployment.

Pilots and maintainers from the 1st Fighter Wing's 94th Fighter Squadron participated in the Raptor's first trip to Red Flag earlier this year. This large-scale exercise, conducted over the vast range complex near Nellis AFB, Nev., involves realistic air-to-air and air-to-ground engagements, including ground-based defenses. The F-22 showcased its advantages of stealth, supercruise, maneuverability and sensor fusion during the exercise with a 100 percent sortie generation rate for the 94th Fighter Squadron pilots.

"This Red Flag exercise was the first exposure to the Raptor's capabilities for many of the participants," noted Lawson. "The Aggressor pilots quickly became very frustrated because the Raptor's stealth, speed, agility and 360 degree situational awareness ensured an overwhelming advantage."

On June 8, 2007, the National Aeronautic Association awarded the Raptor team the 2006 Collier Trophy, the most prestigious award in American aviation. The Raptor was cited for its overwhelming performance in the demanding Northern Edge joint military exercise. During the large-scale, force-on-force exercise, Raptor pilots flew 97 percent of their scheduled missions, achieved an 80-to-1 kill ratio against their Red Air opponents and scored direct hits with 100 percent of their 1,000-pound, satellite-guided GBU-32 Joint Direct Attack Munition air-to-ground weapons. In addition, Raptor pilots increased overall situational awareness for the entire Blue Force team through the F-22's integrated avionics package.

The Raptor's performance in Northern Edge confirmed that it is the most lethal, reliable, survivable and revolutionary fighter the world has ever seen. NAA President and CEO David Ivey said the fighter's performance has "established the unquestionable superiority of the Raptor, a culmination of years of visionary design, rigorous testing and innovative manufacturing."

A total of 131 Raptors are currently on contract, and 101 Raptors have completed final assembly at the Lockheed Martin facility in Marietta, Ga. Deliveries to the Air Force total 95 F-22s so far. Raptors are delivered at a rate of approximately one every six weeks.

Currently, the Raptor team is working with the Air Force on incremental upgrades to the Raptor fleet to include GBU-39/40 Small Diameter Bomb integration and a new communications system that will enable greater information sharing from the F-22 to other aircraft and combatant commanders. Future upgrades will include synthetic aperture radar (SAR) integration, electronic attack, geolocation improvements and Global Positioning System-guided weapon retargeting. Operational testing of these upgrades is scheduled to start in 2009 with fielding beginning in 2010.

The F-22 Raptor is one of two of the world's only 5TH generation fighters, both built by Lockheed Martin. The F-22 is produced in partnership with Boeing and Pratt & Whitney with parts and subsystems provided by approximately

1,000 suppliers in 44 U.S. states. F-22 production takes place at Lockheed Martin Aeronautics facilities in Marietta, Ga.; Fort Worth, Texas; Palmdale, Calif.; and Meridian, Miss., as well as at Boeing's plant in Seattle, Wash. Final assembly and initial flight testing of the Raptor occurs in Marietta.

Raptors are currently assigned to four bases across the United States. Flight testing takes place at the Air Force Flight Test Center at Edwards AFB, Calif. (411th Flight Test Squadron). Operational tactics development is ongoing at Nellis AFB, Nev. (422d Test & Evaluation Squadron). Pilot and crew chief training takes place at Tyndall AFB, Fla. (43rd Fighter Squadron and 325th Maintenance Group). Operational Raptors are assigned to the 1st Fighter Wing at Langley AFB, Va. (27th and 94th Fighter Squadrons) and will be delivered to the 3rd Wing at Elmendorf AFB, Alaska (90th Fighter Squadron) later this summer. Future Raptor beddown locations include Holloman AFB, N.M., and Hickam AFB, Hawaii.

Headquartered in Bethesda, Md., Lockheed Martin 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 2006 sales of \$39.6 billion.

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