

# Lockheed Martin Joint Strike Fighter Takes Flight

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PALMDALE, Calif.

Today the Lockheed Martin Joint Strike Fighter (JSF) X-35A took off at 9:06 a.m. Pacific Daylight Time on its historic and successful first flight, marking its entry into the flight-test program and validating the Lockheed Martin design approach. With a greater than one-to-one thrust-to-weight ratio the Pratt & Whitney F119-611 engine propelled the sleek, supersonic fighter into the California high-desert skies to the cheers of the Lockheed Martin X-35 team. The aircraft landed at the air force flight test center at Edwards Air Force Base.

(Photo: <http://www.newscom.com/cgi-bin/prnh/20001024/DATU075> )

"An awesome aircraft," Lockheed Martin X-35 test pilot Tom Morgenfeld said. "This aircraft looks and flies like a fighter.

"The flight was trouble-free from beginning to end, absolutely no surprises," Morgenfeld continued. "The performance, sheer power and responsiveness were exactly what our engineers predicted. The hours spent training in the simulator were superb preparation. But it's the actual flying that will validate our design and provide the data that will be used for production aircraft to avoid any unexpected problems."

Following the X-35's take-off, Morgenfeld put the conventional takeoff and landing (CTOL) version of the JSF through its paces. The initial flight profile included check-outs of the on-board systems, handling characteristics and down-link connections for the constant stream of critical data-transfer to the flight-test technicians at Palmdale and Edwards Air Force Base.

Vance Coffman, chief executive officer of Lockheed Martin Corp. , said, "This was more than a symbolic first flight. It was the culmination of a sustained effort by our very talented and thoroughly dedicated team, the demonstration of a brilliant design concept, and a faithful commitment to our customers' requirements."

Captain Ted Spilman, Joint Strike Fighter Program Office X-35 Director, noted the significance of the first flight, saying, "Today marks an important day for Lockheed Martin, the Joint Strike Fighter Program, and the Department of Defense. I want to congratulate Lockheed Martin, their program partners Northrop Grumman and BAE Systems, and all of their other subcontractors and suppliers on this tremendous accomplishment. This first flight of the X-35A marks the culminating point of over four years of hard work by thousands of people in government and industry and is an key example of what industry, in partnership with the Government, can accomplish for the joint warriors of tomorrow. We look forward to seeing the results of the upcoming flight tests on this aircraft in its Air Force role, and eagerly await the future testing of the X-35s in their Navy and Marine configurations. The Joint Strike Fighter program is the linchpin for our future tactical aviation forces and the flight of the X-35A today is a tremendous step in the fielding of these aircraft for our Air Force, Navy, Marine, Allied and Coalition warfighters."

"I am extremely proud of our international JSF team," said Dain Hancock, president of Lockheed Martin Aeronautics Company. "Our patience and management attention to produce the most affordable and capable JSF has paid off as we head into the flight-test program. I also want to acknowledge the fighter expertise of the entire Lockheed Martin team, which represents more than 70 percent of the world's fighter-industry knowledge base.

"This event is all the more significant because of the high degree of fidelity between the X-35's configuration and the aircraft we will propose for the production phase of the program. The aerodynamics, propulsion system and handling qualities are highly representative of the production JSF," Hancock said.

The first flight included significant portions of the flight-test profile.

"This was not just a ferry flight from one airport to another," Morgenfeld explained. "We flew some

important test points and made this a working flight-test activity."

The X-35 climbed quickly to an altitude of 10,000 feet, maintained an airspeed of 250 knots while accomplishing a series of figure-eight maneuvers to demonstrate key handling qualities and to validate design predictions.

"Our design approach to solve the significant technical risk challenges now in the Concept Demonstration Phase, when it's less expensive, is already paying off," said Frank Cappuccio, vice president and program manager of the Lockheed Martin JSF. "Technical challenges overcome now with our X-35 demonstration aircraft ensure a more affordable next phase: Engineering and Manufacturing Development. It's been our objective from day one."

Designed to demonstrate commonality among the U.S. Air Force, Navy and Marine Corps variants, Lockheed Martin's concept demonstration phase will use the same aircraft seen flying today to demonstrate the Marine Corps variant's short takeoff/ vertical landing (STOVL) JSF.

"The forward fuselage of our CTOL aircraft is the forward fuselage originally designed and manufactured for the Navy's CV aircraft," said Harry Blot, vice president and deputy program manager of the Lockheed Martin JSF. "Furthermore, after the X-35A fulfills its flight test requirements, we'll take the airplane that flew today and install a lift fan, a flexible nozzle on the tail, activate the vertical-lift equipment and bring that jet back to the flight-test program as the STOVL version. Now, that's commonality in action.

"It's all part of our plan to build two X-35 concept demonstrator aircraft, but fly three unique variants," Blot continued. "We can do that because of the commonality among the Lockheed Martin configurations."

Lockheed Martin produces the world's most advanced and successful fighter aircraft, including the F-22, F-117 and F-16. The company, in partnership with Northrop Grumman and BAE SYSTEMS, is in competition to build the JSF for the United States and Great Britain. Government selection of a single contractor for the Engineering and Manufacturing Development phase is set for 2001.

Corresponding photos available at:

[http://www.lmaeronautics.com/image\\_gallery/pr\\_photos/jsfpr\\_photos/jsf\\_1stflight/index](http://www.lmaeronautics.com/image_gallery/pr_photos/jsfpr_photos/jsf_1stflight/index) .html

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