



F-35 Lightning II Program Update & Fast Facts

Development Updates

- Second F-35B STOVL variant, BF-2, completed first flight on Feb. 25.
- First F-35 variant equipped with mission systems, BF-4, rolled out of the factory Jan. 21; will lead to the first avionics testing on board an F-35 aircraft. Expected first flight is Summer 2009.
- First weight-optimized F-35A CTOL variant, AF-1, rolled out of the factory on Dec. 19, 2008.
- Second F-35 ground-test article, AG-1, rolled out of the factory on Dec. 17, 2008.
- F-35 completed first supersonic flight on Nov. 13, 2008.
- First F-35A completed testing at Edwards AFB ahead of schedule on Oct. 23, 2008.
- F-35B first flight successfully completed on June 11, 2008.
- USAF Lt. Col. James Kromberg became the first military pilot to fly F-35 (F-35A) on Jan. 30, 2008.
- All three variants have successfully completed Critical Design Review.
- Final Block 3 software capabilities defined.

F-35 AA-1 Flight Testing

- First U.S. Marine pilots the F-35 on March 19, 2009.
- In-flight opening of weapons-bay doors completed on Feb. 24, 2009.
- First supersonic flight completed on Nov. 13, 2008; Mach 1.05.
- Eighty-one flights completed (as of April 15, 2009).
- Engine-out air-start testing completed at Edwards AFB, Calif.
- In-flight refueling system qualifications complete
- Flight Test Update 3.0 installation complete.
- First military pilot to fly the F-35 (Jan. 30, 2008) described handling as “phenomenal.”
- Speed of Mach 0.9 achieved on Jan. 10, 2008.
- Ascent to 38,000 feet on May 3, 2007.
- Helmet-Mounted Display System flown for first time on April 4, 2007.
- F-35 AA-1 successfully completed its first flight on Dec. 15, 2006.
- Aircraft incorporates content from all nine F-35 participant countries.

The first F-35B (BF-1), short takeoff/vertical landing (STOVL) variant, is in flight test.

- Full-power hover-pit testing under way to validate STOVL power and aircraft performance
- Fourteen flights completed.
- Final modification period for STOVL-mode flight complete.
- First flight successfully completed on June 11, 2008.
- All ground tests completed on June 9, 2008.
- Successful ground test of STOVL propulsion system conducted on May 25, 2008.
- Successful afterburner engine runs on May 16, 2008.
- Aircraft moved from production line to flight line on Dec. 18, 2007.

The second F-35B (BF-2) is in flight test.

- First flight completed on Feb. 25, 2009.

All System Development and Demonstration aircraft are in production or on the flight line; first four production-model F-35s started.

- Manufacturing pace is increasing; all test aircraft are in flight testing or production
- The first Low Rate Initial Production aircraft are also in the manufacturing flow.

The F-35 Cooperative Avionics Test Bed (CATBird) has begun airborne avionics testing.

- The CATBird deployed to Edwards AFB, Calif., on April 14, 2009, where it will test F-35 sensor hardware and Mission Systems (MS) software on local ranges.
- On Nov. 25, 2008, CATBird began in-flight integration of F-35 avionics. The entire sensor suite will progress toward full in-flight integration in 2009.
- CATBird, a highly modified 737, will be used to validate the F-35's massively powerful integrated avionics suite in flight before the avionics are flown on the F-35 aircraft.
- CATBird will fly and proof-test the complete, integrated F-35 mission systems package before it flies in an F-35 aircraft.
- Aerial testing of F-35 Communications-Navigation-Identification system completed in half the time planned on CATBird.

The F-35 Autonomic Logistics and Global Sustainment (ALGS) system is active and supporting Manufacturing and Flight Testing

- F-35 Autonomic Logistics System Operations Center is now operational and supporting flight test aircraft.

Funding

- Long-lead funding approved for Low Rate Initial Production lot 3 (18 aircraft).
- Funding approved for Low Rate Initial Production lot 2 (12 aircraft).
- Funding for the first two production aircraft is under contract, and initial fabrication of those two airplanes is under way. Funding for the second phase of low-rate initial production (LRIP 2) is under contract, and the first of those aircraft also are in production; long-lead funding for third phase (LRIP 3), has been authorized by the Department of Defense. LRIP 2 funding provides approval to purchase six conventional takeoff and landing (CTOL) F-35As for the US Air Force and six short takeoff/vertical landing (STOVL) F-35Bs for the U.S. Marine Corps. LRIP 3 approval provides long-lead funding for at least 18 additional F-35s.

International Partners

- All F-35 participant countries have joined the F-35 program's next phase. Those countries are the United Kingdom, Italy, the Netherlands, Turkey, Canada, Australia, Denmark and Norway.

Variant First Flights Remaining

- Carrier variant (CV) F-35C first flight in 2009.

Current as of April 16, 2009

Produced by F-35 Communications Team

Initial Operational Capability (IOC) dates

- 2012 for USMC
- 2013 for USAF
- 2015 for US Navy

Quantities (planned)

- USAF 1,763
- USN/USMC 680
- RAF/RN 138
- Italy 131
- Netherlands 85
- Turkey 100
- Australia 100
- Norway 48
- Denmark 48
- Canada 80

Average Unit Recurring Flyaway Cost (in FY 2002 dollars – the most recent comprehensive estimate)

- F-35A upper-\$40 million
- F-35B mid-\$60 million
- F-35C mid-\$60 million

Recent Decisions

- Norwegian Prime Minister formally recommended to the Parliament that Lockheed Martin's F-35 Lightning II be selected to fulfill Norway's future air-combat capability requirements. (Nov. 2008)
- The Netherlands reaffirmed an earlier decision for the F-35 to be its next generation fighter. A final decision by Parliament to purchase F-35 aircraft for IOT&E will occur in 2009. (Dec. 2008)
- The United Kingdom committed to the purchase of three F-35 Lightning II test aircraft to be constructed in LRIP 3 and 4 (for delivery in 2011 & 2012). (Mar. 2009)
- Lockheed Martin received a \$265 million contract to prepare for the production of 28 additional F-35 Lightning II fighters in the fourth lot of low-rate initial production (LRIP), along with a separate \$320 million contract modification for tooling and test equipment beginning with LRIP 3. The LRIP 4 contract from the U.S. Navy is designated for long-lead materials for 12 U.S. Air Force conventional takeoff and landing (CTOL) variants, 14 U.S. Marine Corps short takeoff/ vertical landing variants, one U.S. Navy carrier variant and one CTOL variant for the Netherlands. The contract also provides for other mission equipment, sustainment support, special tooling and test equipment.(Mar. 2009)

- The Italian Parliament approved the Ministry of Defence plan to enter into the next phase of their involvement in the program, including the purchase of 131 F-35 aircraft and construction of a final assembly facility at Cameri Air Base. (Apr. 2009)