

B-1B Conventional Mission Upgrade Program (CMUP)

SUMMARY

- Initial operational testing of the B-1B Block E identified shortfalls in weapon system effectiveness and suitability. Follow-on operational testing confirms fixes to these shortfalls are effective and suitable. However, false target generation in the Interleaved Search and Track mode of the radar and false failure indications produced by the onboard diagnostic system continue.
- Operational testing also confirmed that the B-1B is effective and suitable when employing the Joint Stand-Off Weapon (JSOW), the Joint Air-to-Surface Standoff Missile (JASSM), the 2,000-pound variant of the Joint Direct Attack Munition (JDAM), and both the Combined Effects Munition (CEM) and Sensor Fuzed Weapon (SFW) variants of the Wind-Corrected Munitions Dispenser.
- Fielded accuracy of representative loads carried by the B-1B during JSOW and JASSM integration operational testing also meet requirements.
- DOT&E approved the B-1B JSOW and JASSM integration test and evaluation master plan in December 2003.



Operational testing of the B-1B confirms the effectiveness and suitability of this weapon system when employing the JSOW and JASSM weapon.

SYSTEM DESCRIPTION AND MISSION

The B-1B, produced by The Boeing Company, is a variable-geometry heavy bomber. The aircraft has four afterburning turbofan engines and its maximum takeoff weight is 477,000 pounds. With air refueling, the B-1B's four-man crew can deliver approximately 50,000 pounds of conventional bombs or precision-guided weapons to targets anywhere in the world at penetration speeds up to Mach 1.2.

The Air Force conducted Initial Operational Test and Evaluation (IOT&E) of the B-1B from 1984 through 1989. The B-1B achieved initial operating capability as a nuclear bomber in FY87. Starting in 1993, the Conventional Mission Upgrade Program (CMUP) marked the aircraft's transition from a nuclear to a conventional role. Initial conventional load was limited to 84 Mark-82 500-pound general-purpose bombs. Block changes carried out under the CMUP have enhanced the aircraft's capabilities as follows:

- Software upgrades to offensive and defensive systems (Block B).
- Capability to deliver CBU-87/89/97 cluster bombs (Block C).
- Communication system upgrades, addition of Global Positioning System navigation, and the capability to deliver the GBU-31 Joint Direct Attack Munition (Block D).
- Avionics computer upgrade to enable the delivery of three different weapon types (one type from each weapon bay) on a single mission and the capability to employ Wind Corrected Munitions Dispenser weapons (Block E).

In addition to these block upgrades, the remaining capability enhancement planned for the B-1B under the CMUP is the integration of the JSOW and the JASSM.

AIR FORCE PROGRAMS

TEST AND EVALUATION ACTIVITY



Initial operational testing of the B-1B Block E identified shortfalls in weapon system effectiveness and suitability. Follow-on operational testing confirms fixes to these shortfalls are effective and suitable. This effort concluded with the completion of JSOW and JASSM integration operational testing. Developmental flight-testing to integrate JSOW and JASSM weapon capability on the B-1B began in March 2003. Operational testing began in December 2003 and concluded in August 2004. The program combined developmental and operational testing and evaluation with a small, independent operational test and evaluation phase to confirm the results of the combined developmental test/operational test. Scheduled events consisted of JSOW and JASSM separation test vehicle performance and the transfer of targeting data to JSOW and JASSM captive flight vehicles. The B-1B employed full and multiple bays of captive-carried JSOW and JASSM weapons as part of realistic operational testing. The release of a representative load of the qualified inventory of B-1B Block E weapons also occurred to ensure JSOW/JASSM integration software had not degraded fielded accuracy capability. The confirmation phase concluded with the release of a guided JSOW and JASSM weapon as well as the release of the 2,000-pound variant of JDAM, and both the CEM and SFW variants of the Wind-Corrected Munitions Dispenser.

TEST AND EVALUATION ASSESSMENT

Operational testing confirmed shortfalls identified during B-1B Block E IOT&E are now effective and suitable. However, false target generation in the Interleaved Search and Track mode of the radar and false failure indications produced by the on-board diagnostic system continue. Operational testing also confirmed that the B-1B is effective and suitable when employing the JSOW, the JASSM, the 2,000-pound variant of the JDAM, and both the CEM and SFW variants of the Wind-Corrected Munitions Dispenser. Fielded accuracy of representative loads carried by the B-1B during JSOW and JASSM integration operational testing also meet requirements.

The B-1B LFT&E program for Block D identified a number of vulnerabilities to threats. These baseline vulnerabilities are also in Block E. However, there is no significant increase in vulnerability due to the addition of B-1B Block E-unique equipment.