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Precision Engagement & Mobility Systems
Global Strike Systems

Laser JDAM Backgrounder

Description & Purpose:
The Laser Joint Attack Direct Munition (LJDAM) expands the capabilities of the Joint Direct Attack Munition (JDAM), a low-cost guidance kit produced by Boeing that converts existing unguided free-fall bombs into near-precision guided "smart" weapons. The JDAM kit consists of a tail section that contains a Global Positioning System/Inertial Navigation System and body strakes for additional stability and lift.

Laser JDAM provides a modular laser sensor kit that is easily installed in the field to the front of existing JDAM weapons. The laser-guided JDAM adds mission flexibility to prosecute targets of opportunity, including mobile targets, to an already outstanding GPS/INS all-weather capability that current JDAMs offer. If bad weather is expected in theater, the LJDAM sensor need not be installed.

Two successful demonstrations against fixed and moving targets have been performed, and developmental flight tests of LJDAM are planned through June 2006 to demonstrate the system is ready for production. Upon completion of developmental testing, the Navy will initiate validation and verification testing. Initial production for Laser JDAM is slated for the fourth quarter of this year.

Customer(s):
U.S. Navy warfighters are very interested in a near-term flexible weapon that can simultaneously be used against stationary targets in adverse weather, and time critical or moving targets in clear weather.

General Characteristics:
Currently, MK-84 and BLU-109 2,000-pound (900-kg) bombs (GBU-31); MK-83 (GBU-32); and BLU-110 1,000-pound (450-kg) bombs (GBU-35), and MK-82 500-pound (225-kg) bombs (GBU-38) are in production to make the cost-effective JDAM. When employed, these weapons have proven highly accurate and can be delivered in any flyable weather. JDAM can be launched from more than 15 miles from the target with updates from GPS satellites to help guide the weapon to the target. LJDAM will initially be integrated with the GBU-38. Follow-on integration with the GBU-31 and GBU-32 is planned.

The JDAM production team includes Honeywell Inc. (inertial measurement unit); Rockwell Collins (global positioning system receiver); HR Textron (tail actuator

subsystem); Lockheed Martin Tactical Defense Systems (mission computer); Lockely (tail fairing); Enser and Eagle-Picher (battery); and Stremel (strakes and cable cover).

Background:
The full-scale production decision (milestone III) for JDAM was made by the U.S. Department of Defense (DoD) in March 2001. The full production rate was expected to exceed 1,000 kits per month by 2002. The DoD planned to buy 87,496 JDAM kits for use by the Air Force, Navy and Marine Corps under the production program that was expected to continue for more than a decade.

As a result of heavy usage during OEF, those plans changed and production numbers were extensively increased. The DoD now plans to procure about 226,000 JDAM kits in several configurations to fit the various warheads.

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