

KC-130J Aircraft

Executive Summary

- DOT&E approved Revision A to the KC-130J Test and Evaluation Master Plan (TEMP) in February 2009.
- The Navy completed Operational Test-IIID (OT-IIID) to assess the performance of a new Terrain Avoidance Warning System (TAWS) as well as other avionics and self-protection upgrades to the platform. The Commander, Operational Test and Evaluation Force (COTF) determined the KC-130J Block D system hardware and software modifications operationally effective and operationally suitable.
- KC-130J is flying with Operational Flight Program (OFP) software version 6.5, which brings the software inline with Air Force 6.0 OFP. A Common OFP between the Air Force and Marine Corps will result in reduced engineering and life-cycle costs for the program.
- The Marine Corps is pursuing an armed KC-130J (Harvest HAWK) to provide persistent direct fire and intelligence, surveillance, reconnaissance (ISR) in support of ground troops.

System

- The KC-130J is a medium-sized four-engine turboprop tactical transport aircraft modified with air and ground refueling capabilities.
- The KC-130J incorporates many of the C-130J attributes including a glass cockpit and digital avionics, advanced integrated diagnostics, defensive systems, and a cargo handling system.
- The KC-130J is outfitted with an air/ground refueling package consisting of an internally carried 3,600 gallon fuselage tank and a hydraulically-powered/electronically-controlled air refueling pod on each wing.
- The current Marine Corps KC-130J (Block D) is flying with OFP software 6.5 that brings the software in line with Air Force Block 6.0 OFP.



Mission

- Combatant Commanders use the KC-130J within a theater of operations for fuel and combat delivery missions which include the following:
 - Aerial refueling of fixed wing, tilt-rotor, and rotary wing platforms equipped with refueling probes
 - Ground refueling of land-based systems such as trucks and storage tanks
 - Airdrop of paratroopers and cargo (palletized, containerized, bulk, and heavy equipment)
 - Airlift delivery of passengers, troops, and cargo
 - Emergency aeromedical evacuations
- Combat Delivery units operate in all weather conditions, use night-vision lighting systems, and may be required to operate globally in civil-controlled airspace.

Prime Contractor

- Lockheed Martin, Marietta, Georgia

Activity

- DOT&E approved Revision A to the KC-130 J TEMP in February 2009.
- The Navy completed FOT&E (OT-IIID) of the Block 6.5 software upgrade, which included a new TAWS, an enhanced Identification Friend or Foe Mode 5, and an upgraded Defensive Electronic Countermeasures/Aircraft Survivability Equipment suite with new self-protection expendable techniques in September 2009. COTF completed the testing in accordance with a DOT&E-approved test plan.
- In FY09 the Marine Corps pursued an armed variant of the KC-130J (Harvest HAWK) under a rapid development and

deployment request in order to provide persistent direct fire and ISR in support of ground troops. This system will consist of a target sensor pod, Hellfire missiles, 30 mm cannon, and fire control station all designed for rapid reconfiguration. This system will not interfere with KC-130J primary aerial refueling or secondary assault support missions. System testing started in September 2009 with expected deployment in mid-FY10.

- LFT&E for Harvest HAWK will occur in FY10.

NAVY PROGRAMS

Assessment

- DOT&E concurs with the COTF determination that the KC-130J Block D system hardware and software modifications are operationally effective and operationally suitable.
- The addition of the TAWS and the capability of overriding the ALE-47 Countermeasures Dispensing System when the Aerial Refueling hoses are not stowed and locked enhance the capability of the aircraft to accomplish its tactical missions in nonpermissive environments.
- Harvest HAWK brings a new offensive mission to the multi-role KC-130J platform that requires redefined roles and

responsibilities as well as adequate training and manning to maintain and operate the system.

Recommendations

- Status of Previous Recommendations. This is the first annual report for this program.
- FY09 Recommendation.
 1. The Navy must complete LFT&E with the Harvest HAWK capability.