

P-8A Multi-Mission Maritime Aircraft (MMA)

Executive Summary

- Contractor developmental ballistic vulnerability testing determined dry bay fire suppression system requirements.
- The Critical Design Review and Design Readiness Review took place in June and August 2007, respectively.
- The delivery and first flight of the initial P-8A test aircraft will be delayed approximately 6 months. This has not yet affected the scheduled start of the IOT&E in 2012.
- DOT&E approved the updated Test and Evaluation Master Plan (TEMP) in March 2007.

System

- The Multi-Mission Maritime Aircraft (MMA) is the Navy's next generation maritime patrol aircraft that will replace the P-3C.
- The MMA is based on the Boeing 737-800 aircraft, but uses the 737-900 extended-range wing.
- It carries and employs anti-ship missiles, air-to-surface weapons, depth bombs, torpedoes, naval mines, sonobuoys, and other expendables.
- The P-8A carries onboard sensors, including radar, electro-optic sensors, and a magnetic anomaly detector.
- Survivability enhancement and vulnerability reduction features are incorporated into the P-8A design.
 - Susceptibility is reduced with an integrated Aircraft Survivability Equipment (ASE) suite that consists of a radar warning receiver, chaff/flare dispenser, directed infrared countermeasures (DIRCM) and Tactical Data Unit (TDU) to control the system. Radio frequency countermeasures, based on a towed decoy, are planned for spiral development with installation provisions (including wiring and mounting pylons) incorporated into all production aircraft.



- Vulnerability is reduced through the addition of fuel tank inerting systems and fire protection systems for the vulnerable dry bays that surround aircraft fuel tanks.

Mission

Units equipped with the MMA will perform a wide-range of patrol missions including:

- Armed anti-submarine warfare
- Armed anti-surface warfare
- Intelligence collection, processing, evaluation, and dissemination to Naval and joint forces
- Maritime and littoral reconnaissance missions

Activity

- The contractor conducted developmental ballistic testing which evaluated the vulnerability of several dry bays.
- The Critical Design Review, originally scheduled for January 2007, took place in June 2007. The schedule slipped due to delays in completing architectural design drawings, especially for the P-8A mission systems and wiring drawings. Because of the schedule slip, the delivery and first flight of the initial P-8A test aircraft will be delayed approximately 6 months.
- DOT&E approved the updated TEMP with the provision that P-3 flights be retained in the test program to validate the modeling and simulation efforts used to characterize the P-3 baseline performance. Side-by-side comparison P-3 flights can be reexamined in the next TEMP update once the baseline performance is fully understood and validated.

Assessment

- Ballistic testing demonstrated that contractor designed dry bay fire suppression systems provide significant reductions in vulnerability to threat induced dry bay fire.
- The flight test requirements for the S-1 full-scale structural test article pose a potential risk to the planned LFT&E timeline and Beyond Low-Rate Initial Production (BLRIP) completion timing. Further delays in delivery of the S-1 Live Fire test aircraft will delay the full-scale LFT&E and the completion date of the BLRIP report.
- During the Critical Design Review, the Navy and contractor identified a new high risk area that could potentially further delay the delivery of the Live Fire test aircraft. They are concerned about the continued increases in the amount of

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installation and checkout required during the production of the aircraft.

- FY07 Recommendation.

1. The program should initiate planning for higher fidelity testing and analyses of fuselage fuel tank leakage rates.

Recommendations

- Status of Previous Recommendations. The Navy has initiated planning with DOT&E for future full-scale vulnerability testing of the structural test article and wings (FY06).