Lockheed Martin's Joint Air-To-Ground Missile (JAGM) Successfully Completes F/A-18 E/F Wind Tunnel Tests

Lockheed Martin has successfully completed an extensive series of wind tunnel tests of its Joint Air-to-Ground Missile (JAGM) system. The tests simulated the flight environments of the Navy's F/A-18 E/F Super Hornet jet fighter in various aircraft configurations of the JAGM and its Navy fixed-wing launcher. The successful wind tunnel tests prepare the Lockheed Martin JAGM team for F/A-18 E/F flight testing later this year.

The JAGM will provide rotary- and fixed-wing pilots, as well as the unmanned aerial systems community, with a precision, adverse-weather, low-collateral-damage weapon to counter both conventional and irregular warfare threats of the 21st century battlefield environment.

The successful F/A-18 E/F high-speed flying qualities wind tunnel tests of JAGM were conducted at the National Aeronautics and Space Administration Ames Research Center in Moffett Field, CA. More than 200 hours of testing ensured minimal changes to the handling characteristics of the F/A-18E/F by the pilot.

Following closely on the flying qualities tests, Lockheed Martin concluded an equally successful series of F/A-18E/F loads tests at the Arnold Engineering Development Center (AEDC) wind tunnel in Tullahoma, TN, totaling 150 hours. Test data collected during this activity was used to further refine the structural requirements of the launcher and JAGM.

Successful F/A-18 E/F safe launch and separation tests were also conducted at the AEDC facility. These tests validated the design of Lockheed Martin and Marvin Engineering's triple-rail JAGM launcher and confirmed the JAGM could be successfully employed from the aircraft. Ensuing tests at the Boeing Vertol wind tunnel in Philadelphia, PA, demonstrated and validated low-speed flight characteristics of the Super Hornet when loaded with JAGM.

"All test objectives were achieved," reported Frank St. John, director of Close Combat Systems for Tactical Missiles/Combat Maneuver Systems at Lockheed Martin Missiles and Fire Control. "This moves the Lockheed Martin team one step closer to F/A-18E/F flight tests later this year."

The U.S. Army's Joint Attack Munition Systems Project Office in Huntsville, AL, is leading the JAGM technology development program to replace the HELLFIRE, Longbow, airborne TOW and Maverick missiles for the Army, Navy and Marine Corps. JAGM will provide the next-generation air-to-ground missile for employment from the services' rotary-wing, fixed-wing and unmanned platforms.

"Cumulatively, our positive test results have demonstrated our mature JAGM provides the lowest-risk, best-performing and most affordable solution for the government's joint missile program," said Rick Edwards, vice president for Lockheed Martin Tactical Missiles/Combat Maneuver Systems.

"We have learned critical lessons during the technology development phase, enabling us to refine our processes. In addition to successful rocket motor testing that confirmed our ability to provide a single-motor solution for all platforms, our mature tri-mode seeker has proven its ability to operate all three sensor modes simultaneously to penetrate battlefield obscurants and countermeasures. We can provide passive and active targeting to defeat advanced threats, stationary and moving, from safe standoff ranges."

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 136,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation reported 2009 sales of $45.2 billion.

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