Kaman Demonstrates Cargo Airdrop Flight Tests With Unmanned Helicopter

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Kaman Aerospace Corporation, a subsidiary of Kaman Corporation (Nasdaq GS: KAMN), has proven in recent tests that the unmanned K-MAX helicopter can resupply troops with cargo airdropped by parachute.

The tests add a new delivery method for the 6,000-pound power lifter, which Lockheed Martinand Kaman have successfully transformed into an unmanned aircraft system for autonomous cargo delivery operations.

At its Bloomfield, Conn., facility in late April, Kaman, in partnership with the U.S. Army's Natick Soldier Research, Development and Engineering Center (NSRDEC), conducted 11 cargo airdrop tests from 300 ft. to 400 ft. above ground level. Kaman used its four-hook carousel for the drops, and during one flight, demonstrated four airdrops in a single mission.

Kaman performed the airdrops using the Army's low cost low altitude cross parachute, a one-time-use expendable aerodynamic decelerator that costs about $375. Currently used to airdrop supplies from manned aircraft in Afghanistan, the parachute is designed to handle 80 to 600 pound payloads delivered from 150 ft to 300 ft altitudes above ground level.

"These airdrop tests continue our progress to advance the Unmanned K-MAX helicopter as a battlefield cargo delivery system," said Terry Fogarty, general manager of Unmanned Aircraft Systems Product Group at Kaman Helicopters. "Airdropping cargo as an option to placing a sling load on the ground can enhance an unmanned aircraft's survivability while delivering critical supplies in combat environments."

The Army NSRDEC personnel collaborated in the airdrops. "The demonstration exceeded our expectations," said Richard Benney, division leader, Aerial Delivery Equipment and Systems Division. "This capability will save lives, allowing us to deliver supplies to our troops using unmanned helicopters, while also avoiding the threat to the delivery platform in high-threat areas."

In January, Kaman and Lockheed Martin successfully demonstrated to the U.S. Marine Corps at Dugway Proving Grounds in Utah the capability of the unmanned K-MAX helicopter to resupply troops by unmanned helicopter at forward operating bases in Afghanistan. During the demonstration, the team showed autonomous and remote control sling load delivery over both line-of-sight and satellite-base beyond-line-of-sight data links.

Future tests may include the use of single and/or multiple Joint Precision Airdrop Systems (JPADS) from higher altitudes. JPADS could be used in higher threat environments to resupply multiple and dispersed ground forces from one unmanned K-MAX release point.

Kaman designed the K-MAX helicopter to deliver sling loads up to 6,000 pounds at sea level, and 4,300 pounds at 15,000 ft. Lockheed Martin's mission management and control systems give the K-MAX helicopter unparalleled flight autonomy in remote environments and over large distances.

"Autonomous flight will enable military users to fly the unmanned K-MAX helicopter in day or night conditions," said Dan Spoor, Aviation Systems vice president at Lockheed Martin's Mission Systems & Sensors facility in Owego, NY. "Adding an airdrop capability to the system gives the Army or Marines another resupply option."

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.

Kaman Corporation, founded in 1945 by aviation pioneer Charles H. Kaman, and headquartered in Bloomfield, Connecticut conducts business in the aerospace and industrial distribution markets. The company produces and/or markets widely used proprietary aircraft bearings and components; complex metallic and composite aerostructures for commercial, military and general aviation fixed and rotary wing aircraft; safing and arming solutions for missile and bomb systems for the U.S. and allied militaries; subcontract helicopter work; and support for the company's SH-2G Super Seasprite maritime helicopters and K-MAX medium-to-heavy lift helicopters. The company is also a leading distributor of industrial parts, and operates nearly 200 customer service centers and five distribution

centers across North America.

For additional information, visit our web sites:
http://www.lockheedmartin.com/
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