

Lockheed Martin's HULC(TM) Robotic Exoskeleton Enters Biomechanical Testing At U.S. Army Natick Soldier Systems Center

ORLANDO, Fla., June 30, 2011 /PRNewswire/ -- Biomechanical testing of the Lockheed Martin (NYSE: LMT) ruggedized HULC™ exoskeleton is now underway at the U.S. Army Natick Soldier Research, Development and Engineering Center in Natick, Mass. The testing is expected to help shape future requirements for the HULC based on feedback from soldiers.

(Photo: <http://photos.prnewswire.com/prnh/20110630/FL28804>)

For seven weeks, U.S. Army warfighters will be evaluated to assess the effects of load carriage with and without use of the HULC exoskeleton. Biomechanical testing will measure changes in energy expended by users, assessing how quickly individuals acclimate to the system and whether there is a reduction in metabolic cost.

Testing will also determine if there is an improvement in metabolic efficiency as measured by oxygen consumption per unit total mass, when wearing the ruggedized HULC as compared to not wearing the device under identical load, speed, grade and duration conditions.

Lockheed Martin's HULC is an un-tethered, battery powered, hydraulic-actuated anthropomorphic exoskeleton that provides users the ability to carry loads up to 200 pounds for up to 20 kilometers on a single battery charge over all terrains. HULC's design allows for deep squats, crawls and upper-body lifting with minimal human exertion. An advanced onboard micro-computer ensures the exoskeleton moves in concert with the operator. HULC is an innovative solution that improves endurance and reduces the risk of injury to the soldier.

"Our latest generation of the HULC design provides unmatched flexibility, strength and endurance," said Jim Ni, HULC program manager at Lockheed Martin Missiles and Fire Control. "It will enable soldiers to do things they cannot do today, while helping to protect them from musculoskeletal injuries."

The Department of Veterans Affairs reports that the most prevalent service-connected disabilities stem from musculoskeletal system injuries.

Following successful biomechanical evaluations, the ruggedized HULC system will transition to a series of field excursions to measure its utility in simulated operational environments.

Lockheed Martin is a leading provider of advanced technology solutions for the warfighter, including wearable situational awareness, a broad range of mobility assistance systems and power management systems. Lockheed Martin is also exploring exoskeleton designs for industrial, medical and a wide variety of military mission specific applications.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 126,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation's 2010 sales from continuing operations were \$45.8 billion.

For additional information, visit our website:

<http://www.lockheedmartin.com>

SOURCE Lockheed Martin