Orion Spacecraft Transfers To Launch Abort System Facility

Orion in Final Integration Steps Before Exploration Flight Test-1

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DENVER, Sept. 29, 2014 /PRNewswire/ -- NASA and Lockheed Martin [NYSE: LMT] have finished fueling the Orion spacecraft with ammonia, hydrazine and high pressure helium at Kennedy Space Center's Payload Hazardous Servicing Facility. Orion has now been moved to the Launch Abort System Facility for integration with the launch abort system (LAS).

"Once the launch abort system is integrated and functional testing concludes, the spacecraft is considered done," said Michael Hawes Lockheed Martin Orion program manager. "Then in November we'll integrate to the rocket, which is rolling out to the launch pad today."

Orion's LAS is a critical launch safety technology designed to immediately pull the capsule and crew out of harm's way in the event of an emergency. The LAS is the highest thrust and acceleration escape system ever created, significantly improving crew safety from pad operations through ascent. It consists of three solid rocket motors: an attitude control motor, which steers the crew away from the launch vehicle, a jettison motor, which pulls the LAS away from the crew module, and an abort motor, which propels the crew module away from the launch pad.

During Exploration Flight Test-1 (EFT-1) all nominal functions, including separation, will be tested on the LAS, however the abort functions are inactive. The LAS abort functions were previously tested in New Mexico at White Sands Missile Range during Pad Abort Test 1. You can watch the test video here: http://www.youtube.com/watch?v=j68mszdhTmY.

During EFT-1, the uncrewed spacecraft will launch on a Delta IV Heavy rocket and will travel 3,600 miles beyond low Earth orbit—15 times further than the International Space Station. That same day, Orion will return to Earth at a speed of approximately 20,000 mph for a splashdown in the Pacific Ocean. EFT-1 will provide engineers with data about systems critical to crew safety such as heat shield performance, separation events, avionics and software performance, attitude control and guidance, parachute deployment, and recovery operations to validate designs of the spacecraft before it begins carrying humans to new destinations in deep space.

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that employs approximately 113,000 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 net sales for 2013 were $45.4 billion.

Media Contact:
Allison Rakes; (303) 977-7135; allison.m.rakes@lmco.com

For more information about Orion visit:
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