Lockheed Martin Successfully Tests Design Changes For Orion Spacecraft's Fairing Separation System

Data from First Test Flight Makes Technology Safer, Lighter and More Reliable

SUNNYVALE, Calif., July 30, 2015 /PRNewswire/ -- Lockheed Martin (NYSE:LMT) engineers have successfully completed testing of design changes made to the NASA Orion spacecraft's fairing separation system. These changes resulted from data collected during Orion's first test flight on Dec. 5, 2014.

Watch one of the tests in the series here:https://www.youtube.com/watch?v=bErA_UhLjKg

A finished Orion spacecraft has three fairings, or panels, that protect the service module radiators and solar arrays from heat, wind and acoustics during ascent into space. For the purposes of collecting data during these tests, only one fairing was separated.

The separation took about three seconds and the design changes tested were:

- New push-off springs that push on the fairing for a longer period of time to provide increased safety and reliability.
- As part of an ongoing mass reduction effort, the team used four crew module structural attachments instead of six.
- Star trackers, or cameras that provide positioning from the stars, are used for navigation on the spacecraft. The fairing separation system pulls off the star tracker covers which prevent contamination before launch, and this process was tested for the first time.

In addition, these tests evaluated different pyrotechnic variances and higher load cases in order to prepare for Exploration Mission-1, when Orion is launched on NASA's new Space Launch System rocket. The team was also able to collect shock data, which will be provided to the European Space Agency (ESA) to support their work designing, building and testing the service module. In fact, these same fairings will be used for service module acoustics and vibe testing taking place at NASA's Plum Brook facility in Ohio later this year.

"The fairing separation is one of our very first critical events," saidMike Hawes, Lockheed Martin Orion vice president and program manager. "If it doesn't work as planned, it's probable the mission cannot continue, and tests like this help ensure it will work right the first time and every time."

For additional information, visit our website:www.lockheedmartin.com/orion.

About Lockheed Martin
Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that employs approximately 112,000 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 2014 were $45.6 billion.

Media Contact:
Allison Rakes, +1 240-364-4367; Allison.m.rakes@lmco.com

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