

Entering into Space and New Energy and Propulsion Technology (7)

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ORION EUROPEAN SERVICE MODULE PROPULSION SUBSYSTEM ON FIRE

Abstract

The ORION spacecraft is a multi-purpose crew vehicle designed to support missions beyond low Earth orbit. ORION will be launched by the Space Launch System (SLS).

NASA, ESA, European and US Industry are working together to develop the ORION spacecraft. ESA is responsible for the European Service Module and awarded a contract to Airbus DS GmbH for its development and production of the first flight unit. The European Service Module provides translational thrust and 3 axis attitude control for the spacecraft, stores life support consumables for the crew module (oxygen, nitrogen and water), and provides thermal control and power.

In January 2017 the Propulsion Subsystem Qualification Model was shipped from Sweden to the NASA White Sands Test Facility. After mounting of the test article to the sea-level test bench and performance of the acceptance test program the hot firing test program will start in May 2017.

This paper presents the status of the Orion ESM program with a detailed view on the actual status of the hot firing qualification test program for the Propulsion Subsystem. Also an outlook is given on the upcoming steps up to FM1 delivery in Summer 2017.