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ORION EUROPEAN SERVICE MODULE – AN INTERNATIONAL UNDERTAKING

[European Space Agency (ESA)

Orion blog [entry](#), November 28, 2016

Here is the first part of the 10-paragraph article:]

As the first European Service Module for NASA's Orion spacecraft is being assembled in Bremen, Germany, suppliers all over Europe and the US are delivering their components that will form the chassis and supply life-support and propulsion to the Orion capsule.

Companies from 11 countries have built spacecraft-specific parts for Orion or supplied their proven space-hardware to construct the spacecraft that will fly further afar than any other human-rated spacecraft.

The prime contractor for the European Service Module is [Airbus Defence and Space](#), a European multinational that has put its Bremen facility in charge of the service module programme.

NASA Readies for Major Orion Milestones in 2017

[NASA Feature, December 21, 2016.

This [article](#) includes a 2:30 (minutes:seconds) NASA video, *From Metal to Masterpiece*. Here is the first part of this 6-paragraph article:]

From the beginning of assembly work on the Orion crew module at NASA's Kennedy Space Center in Florida to testing a range of the spacecraft systems, engineers made headway in 2016 in advance of the spacecraft's 2018 mission beyond the moon. A look at the important milestones that lie ahead in the next year give a glimpse into how NASA is pressing ahead to develop, build, test and fly the spacecraft that will enable human missions far into deep space.

Orion Power On

The NASA and Lockheed Martin team at Kennedy spent much of 2016 integrating structural elements into the spacecraft, and then began incorporating critical systems such as avionics components and propulsion tubing.

→ ORION EUROPEAN SERVICE MODULE

An international collaboration

Germany

- Prime Contractor
- European Service Module Assembly Integration & Verification
- Propulsion and Propulsion Drive Electronics
- Centralised Paris Procurement Agent
- On Board Data Network Harness for Qualification Module

Italy

- Structure
- Thermal Control System
- Consumable Storage System
- Power Control and Distribution Unit
- Photovoltaic Assembly
- Meteoroid and Debris Protection System

Switzerland

- Secondary Structure
- Solar Array Drive Assembly
- Solar Array Simulator
- Mechanical Ground Support Equipment

USA

- Gas Tank
- Valves
- On Board Data Network Harness for Flight Module

France

- System Tasks
- Avionics qualification
- Direct Current Harness
- Front End Electronics
- Helium Filters

Belgium

- Tank Bulkhead
- Electrical Ground Support Equipment
- Pressure Regulation Units

Sweden

- Propulsion Qualification Module Integration

Denmark

- Front End Electronics
- Electrical Ground Support Equipment

Norway

- Hydrophobic Filter

Spain

- Thermal Control Unit

The Netherlands

- Solar Array Wings

