

European Service Module delivered to NASA!



This is what the craft will look like when it is in space! Orion's crew capsule looks like a large nosecone at the front. ESA's European Service Module is at the back, with four solar panels stretched out to collect sunlight.

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Would you like to travel to the Moon? You may get the chance one day, in an Orion spacecraft! The Orion is being designed by NASA to carry four astronauts to the Moon and beyond. ESA is developing part of Orion, called the European Service Module. This first European Service Module has now been moved from where it was being built, in the city of Bremen in Germany, all the way to the Kennedy Space Center in Florida, USA.

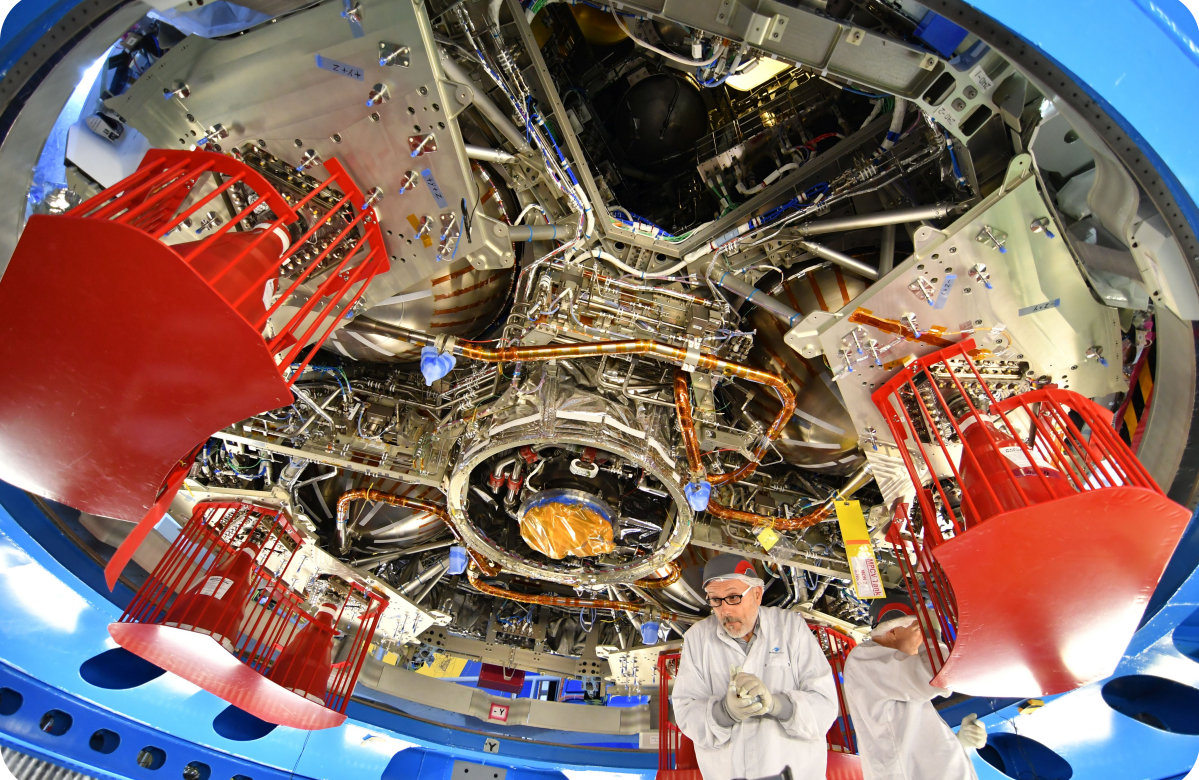


The nosecone of the Antonov An-124 was opened in order to load the European Service Module

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Getting the European Service Module to the USA was a challenge! A special aircraft for heavy-duty cargo, called the Antonov An-124, was used to fly it there. The European Service Module had to be carefully packaged in a custom-built container to maintain the correct environment inside.

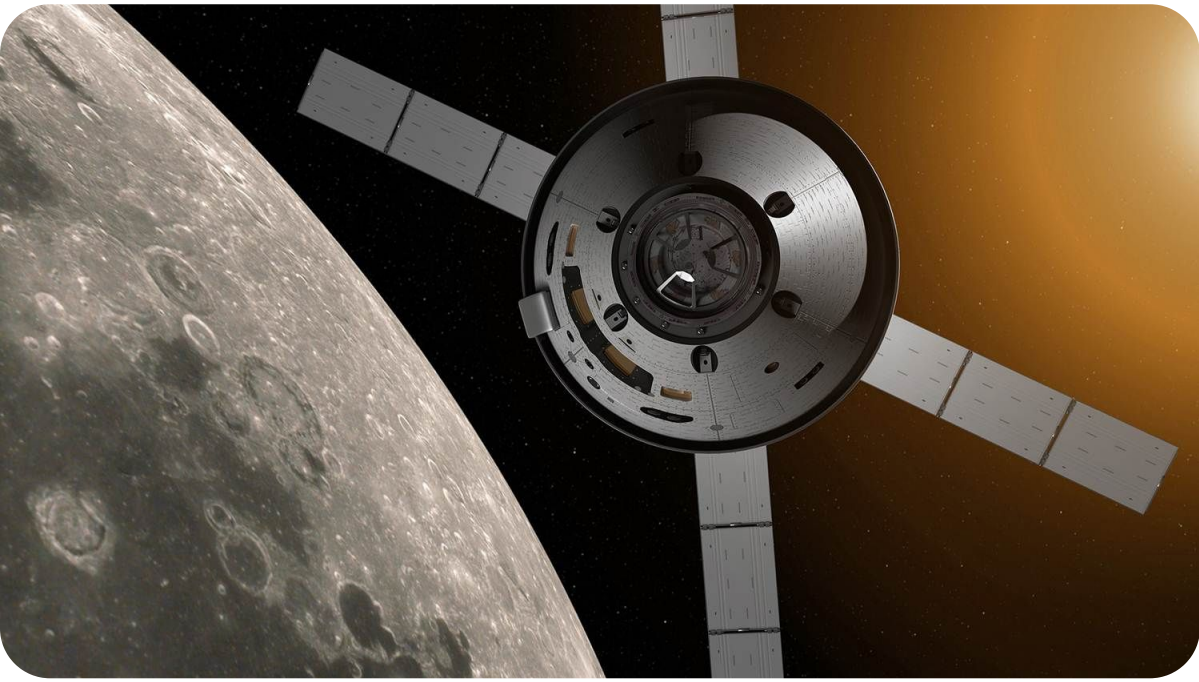
The European Service Module is designed to attach onto the Orion craft. It has three types of engine to propel an Orion to its destination, and can turn the craft in all directions. Inside the European Service Module are large fuel tanks, as well as things that astronauts need to survive, such as air to breathe and water to drink. There are also radiators and heat exchangers designed to keep Orion – and the astronauts inside it! – at a comfortable temperature.



Technicians working underneath the European Service Module

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Now that the European Service Module is at the Kennedy Space Center, it can be connected to the Orion crew module in preparation for Exploration Mission-1 to launch in 2020. This will be a test flight, designed to travel far into space to check that everything is working properly. For safety reasons, Exploration Mission-1 will have not have astronauts onboard.



Would you like to travel to the Moon onboard an Orion?

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However, a second European Service Module is already being built. This one will be part of an Orion mission that will send astronauts into space and around the Moon! Eventually, Orion craft powered by European Service Modules will help to build an outpost orbiting the Moon called the Gateway!

Cool fact: The European Service Module has four solar panels, collecting energy from the Sun and turning it into electricity – enough to power two households on Earth!