



Press Release

Colleferro, 7 March 2017

A successful ninth mission for Vega

Colleferro, 7 March – The Vega launcher has successfully completed its first mission in 2017 (and ninth overall), by flawlessly delivering the Sentinel 2B Earth observation satellite into orbit.

The mission lifted off from the space centre in Kourou, French Guiana, at 10:49 pm on 6 March (2:49 am on 7 March CET).

Avio's CEO Giulio Ranzo had the following to say: *"Today's successful mission has once again underlined the reliability and precision of the Vega launcher. On this occasion, we helped ESA to deliver into orbit the Sentinel 2B Earth observation satellite.*

We are happy to have made another contribution to humankind's ability to monitor the health of our planet by flawlessly placing the satellite in orbit. We constantly strive to develop new technologies and launchers that offer ever greater performance. Just a few days ago, we finished making the first P120 in our facility in Colleferro, near Rome. It is the biggest carbon fibre solid propellant engine that has ever been built anywhere in the world and it will be used in the new Vega C and Ariane 6 European launchers, which will give Europe increasingly sophisticated and effective capabilities and have their maiden flights in 2019 and 2020."

The Sentinel 2B Earth observation satellite is part of the Copernicus programme, which is directed by the European Commission in partnership with ESA. Its main roles will include managing data and images from natural disasters and monitoring the oceans, vegetation and the atmosphere. In addition, it will have many more important objectives relating to matters such as climate change and civil protection. Sentinel 2B will join Sentinel 2A, which was delivered into orbit by the Vega launcher in 2015. The two satellites will provide high-resolution images of the entire surface of the globe every five days.

Vega is a European launcher that was designed, developed and built in Italy by Avio, through its subsidiary ELV (30% owned by ASI, the Italian Space Agency). It belongs to a new generation of vehicles designed to transfer satellites into low Earth orbit (between 300 and 1,500 km from Earth) for institutional and scientific purposes, in order to observe the Earth and monitor the environment. 65% of the funding for Vega came from Italy and it was built in the Avio production plant in Colleferro, near Rome. It complements the family of European launchers and it is capable of placing into orbit satellites with masses of up to 2,000 kg.

Following another exceptional success by one of its products, Avio is continuing to work towards listing on the stock market. As long as everything goes as planned with the necessary authorization procedures, it hopes to complete the process by the end of April 2017.

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Avio S.p.A.

Avio is a leading international space launcher, spacecraft propulsion and space transport group. It employs over 800 people and has a total of 5 sites in Italy, France and French Guiana. In 2015, it generated approximately €260 million in revenue.

The Avio Group manufactures the Vega launcher, with its subsidiary ELV (30% owned by the Italian Space Agency) as prime contractor. This makes Italy one of the very few countries in the world with the ability to produce a complete space launch vehicle.

Avio will build the new Vega C launcher and contribute to the new Ariane 6 launcher by providing the new solid engines and the Vinci and Vulcain liquid oxygen turbopumps.

The new solid propulsion engine (currently named P120C) for the new Ariane 6 European launch vehicle and the new, more powerful version of the Vega launcher will be developed and built by Europropulsion (a 50:50 joint venture by Avio and ASL). To create this engine and the new Zefiro 40 engine (built and tested in Italy and designed for the second stage of the Vega launch vehicle), a new composite material made of pre-impregnated carbon fibre will be used. It will be made directly by Avio in Italy, in its research centres in Colleferro (near Rome) and Airola (near Benevento).

Avio has many years of experience in the design and construction of solid and liquid propellant propulsion systems for space launch vehicles and tactical propulsion. Avio built the liquid oxygen turbopump for the Vulcain cryogenic engine, as well as the two lateral solid propellant engines for Ariane 5, the first stage of the Aster 30 anti-missile defence missile. To date, Avio solid propulsion has been used successfully in all of Ariane's launches (which number over 230 in total) and all of Vega's launches.

In the field of satellites, the Avio Group has built and supplied propulsion subsystems for ESA and ASI to put into orbit and control over 30 satellites, including most recently SICRAL and SmallGEO.