

Video: Hera Propulsion Module leak test, in time-lapse

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Credit: European Space Agency

ESA's Hera mission for planetary defense will perform a close-up survey of the Dimorphos asteroid in deep space. But first Hera needs to cross millions of kilometers of space to get there. That is the task of Hera's Propulsion Module, forming around half of the overall spacecraft, which has been prepared by Italy's Avio company.

Formed of a central tube plus a supporting structure, the Module has been fitted with propellant tanks, piping and thrusters (inside the red protective covers). But before it can be joined to Hera's other element, the Core Module, this Propulsion Module had to undergo its crucial "global leak test"—as seen in this video.

The Module was filled with gaseous nitrogen, then placed inside its container. Sensors added to the interior can detect any pressure change inside the container over the course of the night. Success means Hera is ready to travel to OHB in Germany to be mated with the Core Module. At this point the Hera spacecraft will be complete, and the mission will come a major step nearer to space. Next rendezvous for Hera is the Environmental Test campaign at ESTEC, to make sure Hera survives in the harsh launch and space environment.

Provided by European Space Agency

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