



Aerojet Rocketdyne Propulsion Powers OSIRIS-REx Asteroid Sample Collection

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REDMOND, Wash., Oct. 19, 2020 (GLOBE NEWSWIRE) -- Powered by Aerojet Rocketdyne propulsion, the OSIRIS-REx spacecraft will execute its long awaited sample collection of asteroid Bennu on Oct. 20. OSIRIS-REx is a NASA mission that will enable us to learn more about the formation of our solar system by collecting a sample from near-Earth asteroid Bennu, and returning the sample to Earth for study. Aerojet Rocketdyne is the sole propulsion provider for the OSIRIS-REx spacecraft, providing all 28 of the rocket engines aboard. Aerojet Rocketdyne provided the engines to Lockheed Martin, the spacecraft prime contractor.



Artist's conception of NASA's OSIRIS-REx spacecraft collecting a sample from the asteroid Bennu. OSIRIS-REx's propulsion system is comprised of 28 Aerojet Rocketdyne engines. Credit: NASA/Goddard/University of Arizona

The highly anticipated sample collection is a culmination of nearly two years of surveying Bennu and rehearsing the operation. Aerojet Rocketdyne engines will maneuver the spacecraft from orbit toward the desired touchdown location on the surface of Bennu. Once contact is achieved, nitrogen gas will be directed onto the surface to blow small particles of regolith into the Touch-and-Go Sample Acquisition Mechanism, or TAGSAM. After the sample is secure, Aerojet Rocketdyne engines will safely propel the spacecraft away from the asteroid's surface.

"The sample collection portion of the mission requires our engines to perform with extremely high precision with no room for error," said Aerojet Rocketdyne CEO and President Eileen P. Drake. "From the ultra-low-thrust engines that fine tune the spacecraft's orbit, to the higher thrust engines that will propel OSIRIS-REx back to Earth, each of the 28 Aerojet Rocketdyne engines on the spacecraft are critical to the success of the mission."

The departure window for OSIRIS-REx to return to Earth opens in March 2021. Once the window opens, four high-thrust engines will place OSIRIS-REx on a trajectory that intersects the orbit of the Earth in September 2023. The final maneuver will involve steering the spacecraft away from Earth after the sample return capsule has been jettisoned for reentry, and placing the spacecraft into a stable orbit around the Sun.

The propulsion suite on OSIRIS-REx is comprised of the following engines: four 60-lbf MR-107S, six 5-lbf MR-106L, 16 1-lbf MR-111G, and two 0.1-lbf MR-401. All 28 engines on OSIRIS-REx were developed at Aerojet Rocketdyne's facility in Redmond, Washington. In addition to the critical in-space propulsion provided to the spacecraft, Aerojet Rocketdyne's contribution to the OSIRIS-REx mission extended to the launch vehicle's first and second stages as well.

About Aerojet Rocketdyne: Aerojet Rocketdyne, a subsidiary of Aerojet Rocketdyne Holdings, Inc. (NYSE:AJRD), is a world-recognized aerospace and defense leader that provides propulsion systems and energetics to the space, missile defense and strategic systems, and tactical systems areas, in support of domestic and international customers. For more information, visit www.Rocket.com and www.AerojetRocketdyne.com. Follow Aerojet Rocketdyne and CEO Eileen Drake on Twitter at [@AerojetRdyne](https://twitter.com/AerojetRdyne) and [@DrakeEileen](https://twitter.com/DrakeEileen).

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A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/43499876-5942-484f-acdf-68d97438ff8a>



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