



## News Release

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## Frontier Aerospace TALOS® Engines Used For Space Exploration

*MON-25 cold propellant thrusters used in space, an industry-first*

THOUSAND OAKS, Calif. – Feb. 13, 2024 – Frontier Aerospace, a leader in next-generation liquid rocket engines used for commercial space, exploration, and missile defense, reveals its attitude control and axial thrusters were used during Astrobotic's Peregrine Mission.

Frontier Aerospace provided a complete flight set of [Thruster Advancement for Low-Temperature Operations in Space](#) (TALOS®) attitude control and axial thrusters for the [Peregrine Lunar Lander](#). Twelve 10-lbf thrusters provided attitude control, and five 150-lbf thrusters were designed to provide entry, descent, and landing control.

"We want to extend our gratitude to our invaluable partners who played instrumental roles in the development and success of our next-generation propulsion technology. Collaborating seamlessly, NASA, Jet Propulsion Laboratory, Purdue's Zucrow Labs, and Astrobotic have demonstrated dedication, technical expertise, and shared commitment to our organization as we push the boundaries of innovation," said Jim McKinnon, president of Frontier Aerospace. "Their contributions have accelerated the realization of this technology and strengthened the collaborative spirit that defines space exploration. We sincerely thank these esteemed partners for shaping our journey."

This achievement is pivotal in the company's commitment to advancing cost-effective space propulsion. The mission marked the first time cold propellant engines, using MON-25, were used for an exploration mission. Specifically optimized for high performance with MON-25, the engines provide low propellant freezing points, reducing power and thermal control requirements.

McKinnon continued, "Congratulations to NASA and Astrobotic for their groundbreaking achievements. The data collected will benefit future missions. We remain dedicated to providing propulsion products that will continue playing a pivotal role in supporting future missions, and we look forward to supporting Astrobotic's next NASA CLPS mission, [Griffin](#), with five 700-lbf main engines."

[TALOS thrusters](#) were developed as part of the Game Changing Development Program, administered by NASA's Space Technology Mission Directorate, which aimed to develop

next-generation small rocket engines to help reduce the cost of NASA and commercial spacecraft.

### About Frontier Aerospace

Frontier was founded to provide innovative space propulsion solutions. Frontier has a proven rapid development approach that produces reliable mission-optimized and extensively tested designs at low cost. The company offers propulsion technologies, from concept through product development and qualification. Engines are used in lunar landers/deep space applications, space transportation, earth observation satellites, and missile defense. For more information, please visit [www.frontier.us](http://www.frontier.us).

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