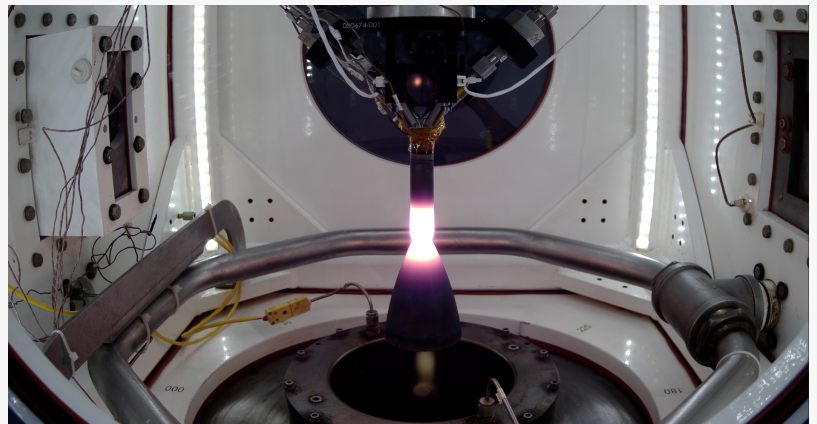
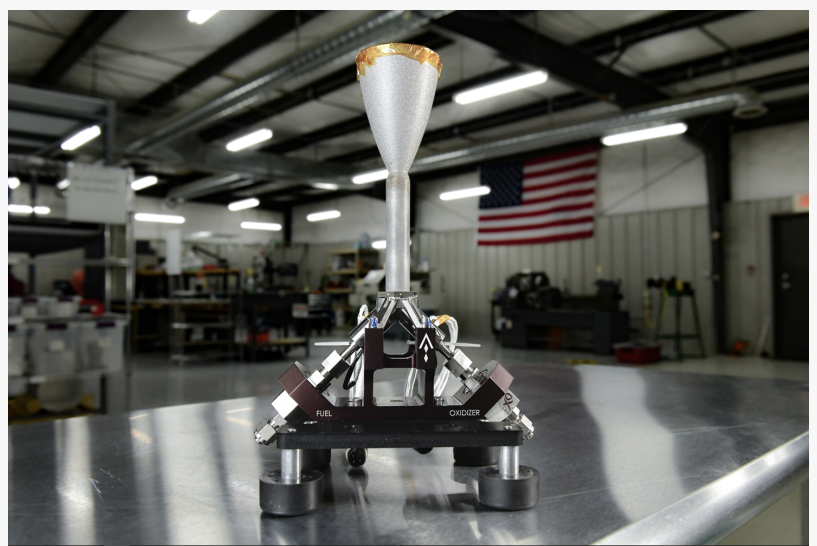


AGILE Space Industries Qualifies A110 Lunar RCS Thruster

Giant Leaps Start with Small Steps

DURANGO, COLORADO, USA, April 12, 2023 /EINPresswire.com/ -- [Agile Space Industries](#) (Agile) has taken an important step toward the development of lunar landers for commercial lunar missions and supporting the return of humans to the Moon under NASA's Artemis Program. That important step is the successful completion of the qualification testing milestone of the Agile [A110](#) bipropellant thruster which is designed to precisely guide Lunar Landers as they touch down on the lunar surface. The A110 is being used for the reaction control system on the ispace Mission 3 lunar lander spacecraft which will land on the far side of the lunar Moon. Agile successfully performed thruster qualification well ahead of the mission which is planned for 2025. Mission 3 will use Agile's A110 Thruster for precise attitude control, keeping the moon lander pointed in the right direction during the long journey to the moon and making sure it softly touches down in just the right place.



The recent surge in international lunar space activity, galvanized by the Artemis Accords, is enabling the development of a new supply chain of US made lunar landing rocket engines. The US hasn't supplied any lunar landing engines since the Apollo Program over 50 years ago. Meeting the challenges of lunar landings represented a departure from the current state of the art for storable rocket engines. "The existing options for high performance storable rocket engines were not suitable for the unique demands of landing on the Lunar surface, and we

needed to develop a new product to enable their mission.” said Lars Osborne, Agile Chief Engineer for the A110 Thruster. “These are challenges the US space industry has not faced in several generations, and it is thrilling to contribute to a sustainable return to the moon. Qualifying this attitude control thruster is one small step in a larger effort, but one we are proud of.”



Qualification testing is the process of verifying that a design meets the intent of the specification. For the A110, that was the process of building a flight-quality thruster and subjecting it to vibration, shock, and hot fire testing, exceeding the expected conditions during the mission. “Testing the thruster in a high-fidelity environment across all potential mission conditions is something we could have only done using our advanced hypergolic test stands, and our customers have confidence knowing it

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AGILE Space Industries

will work when they need it. It’s to test every potential scenario, because on final descent to the lunar surface, scrubbing is not an option” said Daudi Barnes, CTO and Founder of Agile.

The A110 Thruster is also pioneering the commercial use of high-performance M20 fuel. The hydrazine/monomethylhydrazine blend increases vehicle

performance for high ΔV missions, such as landing on the Moon. Alongside the production work to build, acceptance test, and deliver dozens of A110 thrusters for contracted flight programs, Agile is developing multiple new thrusters, combustion devices, and propulsion subsystems to support other Lunar Lander, Spacecraft, and Launch Vehicle programs. Since its founding in 2019, Agile has developed and hot fire tested nine rocket engines and combustion devices from clean-slate designs, firing them in-house in either of its two hypergolic propellant vacuum test stands. Today, Agile Space Industries offers thrusters, testing services, metal 3D printing, and complete propulsion systems to its customers.

About Agile Space Industries

Agile Space Industries (www.agilespaceindustries.com) is an in-space propulsion solution provider, specializing in hypergolic chemical systems. Agile has industry leading expertise in the design of chemical-propulsion rocket thrusters. Rapid prototyping, development, qualification, and delivery is catalyzed by in-house additive manufacturing and engine test capability. The company employs more than 65 people between facilities in Durango, Colorado and Mount

Pleasant, PA that specialize in component, system development, test and additive manufacturing. Agile is working with numerous primes as well as the US Government on various spacecraft and launch vehicle propulsion projects.

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