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Velo3D and Launcher Expand High-Performance Liquid Rocket Engine Component-Manufacturing Collaboration

Rocket developer adds a second Sapphire® 3D printing system to its facility

CAMPBELL, Calif. – September 1, 2021 – The partnership betweenVelo3D Inc., a leader in additive manufacturing (AM) for high-value metal parts, and Launcher, a developer of high-performance rockets for small satellites, is proving out the value of 3D printing for delivering these satellites to orbit cost-effectively and with destination-orbit flexibility. Launcher purchased a Velo3D metal additive manufacturing solution to print Inconel parts in April 2021 and has recently added a second one that prints Titanium.

Following successful testing at NASA's Stennis Space Center of Launcher's liquid oxygen (LOX) turbopump for its high performance closed cycle liquid rocket engine, Launcher is now working with Velo3D to 3D print its fuel pump, flight turbine housing parts, and Orbiter pressure vessels—the latter to be manufactured with the second Velo3D Sapphire® metal AM system.

"Velo3D really delivered on our turbopump, including its 3D-printed rotating impeller, all of which functioned perfectly the very first time at 30,000 rpm, using the first prototype," said Max Haot, founder & CEO of Launcher.

"Rocket engine turbopump parts typically require casting, forging and welding. Tooling required for these processes increases the cost of development and reduces flexibility between design iterations. The ability to 3D print our turbopump—including rotating Inconel shrouded impellers, thanks to Velo3D's zero-degree technology makes it possible now at a lower cost and increased innovation through iteration between each prototype."

Founded in 2017, Launcher is an emerging-technology company dedicated to developing efficient rockets that can deliver small satellites to orbit. Their "Launcher Light" rocket will carry payloads of up to 150 kgs (330 lbs) to low-earth orbit, using a single E-2 engine. A first launch is scheduled for 2024.

One of the company's strategies is to use additive manufacturing in as many rocket components as possible. While Launcher's new advanced manufacturing facility in Los Angeles will include a wide variety of in-house capabilities, the company also plans to take advantage of Velo3D's contract manufacturing partners like Stratasys Direct Manufacturing when scaling up production, particularly for AM.

"We're very excited about working with innovative companies like Launcher," said Benny Buller, founder and CEO of Velo3D. "Not only have they already proven out the value and experienced the quality of advanced metal AM through current projects, they understand the potential that this technology holds for expanding the success of their out-of-this-world

enterprise."

In March, Velo3D announced plans to merge with JAWS Spitfire Acquisition Corporation (NYSE: SPFR) and become a public company.

To learn more about how Velo3D empowers engineers and designers to imagine more and additively manufacture nearly anything, follow Velo3D on LinkedIn or visit velo3d.com.

About Velo3D

Velo3D, one of Fast Company's 2021 World's Most Innovative Companies, empowers engineers and designers to imagine more and additively manufacture nearly anything with a fully-integrated patented solution of software, hardware, and process-control featuring Flow™ print preparation software, Assure™ quality assurance software and the Sapphire® family of laser powder bed 3D printers. Velo3D additive manufacturing solutions for 3D-printing high-value metal parts allow for previously impossible geometries, so businesses can make the mission-critical parts they need without compromise. Customers include some of the world's most visionary companies, such as Aerojet Rocketdyne, Chromalloy, Honeywell, LAM Research and Raytheon Technologies.

For more information, follow Velo3D on LinkedIn or visit velo3d.com.

About Launcher

Launcher is developing the world's most efficient rocket and orbit transfer vehicle to deliver small satellites to orbit via dedicated and rideshare launch with a common service and vehicle. Launcher Light is a low cost, responsive & dedicated small satellite launch vehicle built upon our staged combustion engine for maximum efficiency to achieve a low cost to orbit. Launcher Light's third stage is Orbiter – our rocket-agnostic orbital transfer vehicle and satellite platform, uniquely compatible with rideshare launch vehicles. Orbiter is contracted to make its inaugural flight to sun-synchronous orbit via SpaceX Falcon 9 rideshare mission in October 2022. With Orbiter, Launcher is offering rideshare launch services to tailored orbits that better meet a spacecraft customer's mission needs along with a common launch service on a small dedicated launch vehicle when a satellite's mission requires it.

Visit Launcherspace.com or email sales@launcherspace.com for more information.

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