Rocket Lab Completes Successful First Hot Fire of Archimedes Engine for Neutron Rocket

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LONG BEACH, Calif.--(BUSINESS WIRE)-- Rocket Lab USA, Inc. (Nasdaq: RKLB) (“Rocket Lab” or “the Company”), a global leader in launch services and space systems, today announced it has successfully hot fired its new rocket engine Archimedes for the first time, reaching a critical technical milestone toward first launch of the Company’s new medium-lift rocket, Neutron.

Rocket Lab's Archimedes engine has completed a successful hot fire, a key development milestone ahead of the first Neutron rocket launch in mid-2025. (Photo: Business Wire)

Rocket Lab’s engineers completed the hot fire test at the Company’s Engine Test Complex within NASA’s Stennis Space Center in Hancock County, Mississippi, in August 2024. Archimedes performed well and ticked off several key test objectives, including reaching 102% power, anchoring the engine’s design ahead of Neutron’s first flight scheduled for mid-2025 – a schedule that would make Neutron the fastest a commercially developed medium-class launch vehicle has been brought to market. With the hot fire complete and full qualification campaign now underway, the Rocket Lab team is moving into full production of flight engines.

Rocket Lab founder and CEO, Sir Peter Beck, says: “Hot firing Archimedes is a major development milestone for Neutron and our team has done it on an accelerated timeline. Taking a new staged combustion liquid rocket engine from cleansheet design to hot fire in just a couple of years is industry-leading stuff. We’ve been consistently impressed with the performance of Archimedes in test, including with this hot fire, so with this critical milestone completed, we move into production of flight engines confidently and begin to close out the qualification test campaign in parallel to really hone performance for launch next year. From the day we started designing Archimedes we focused on delivering a flight engine, rather than an early-stage prototype destined for multiple reworks and adjustments, so it's gratifying to see this strategy bear fruit.”

The Archimedes engine will power Rocket Lab’s new reusable medium-lift rocket Neutron, a next-generation challenger to deliver a cost-effective, reliable, and responsive launch service for commercial and government missions. The advanced design of Neutron includes carbon composite for all of the rocket’s major structures and an innovative upper stage that enables high-performance for complex satellite deployments, including the deployment of satellite mega-constellations.

The Archimedes engine is an oxidizer rich staged combustion cycle engine that will power the reusable first stage of Neutron and the new rocket’s second stage that is designed to carry up to 13,000 kilograms of payload to space. Capable of producing up to 165,000 (733 kilonewtons) pounds of thrust per engine, Archimedes operates at lower stress levels than other rocket engines to enable rapid and reliable reusability. The combined thrust of nine Archimedes engines for Neutron’s first stage is designed to reach 1,450,000 lbf total. Archimedes uses a cryogenic propellant mix of liquid oxygen and LNG to enable higher reusability and performance, and many of its critical components are 3D printed including Archimedes’ turbo pump housings, pre-burner and main chamber components, valve housings, and engine structural components.

Production of the Archimedes engines takes place at Rocket Lab’s Engine Development Complex in Long Beach, California.

+ About Rocket Lab

Founded in 2006, Rocket Lab is an end-to-end space company with an established track record of mission success. We deliver reliable launch services, satellite manufacture, spacecraft components, and on-orbit management solutions that make it faster, easier, and more affordable to access space. Headquartered in Long Beach, California, Rocket Lab designs and manufactures the Electron small orbital launch vehicle, our family of spacecraft platforms, and the Company is developing the large Neutron launch

vehicle for constellation deployment. Since its first orbital launch in January 2018, Rocket Lab's Electron launch vehicle has become the second most frequently launched U.S. rocket annually and has delivered 191 satellites to orbit for private and public sector organizations, enabling operations in national security, scientific research, space debris mitigation, Earth observation, climate monitoring, and communications. Rocket Lab spacecraft have been selected to support NASA missions to the Moon and Mars, as well as the first private commercial mission to Venus. Rocket Lab has three launch pads at two launch sites, including two launch pads at a private orbital launch site located in New Zealand and a third launch pad in Virginia. To learn more, visit www.rocketlabusa.com

+ Forward Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. We intend such forward-looking statements to be covered by the safe harbor provisions for forward looking statements contained in Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements contained in this press release other than statements of historical fact, including, without limitation, statements regarding our launch and space systems operations, launch schedule and window, safe and repeatable access to space, Neutron development, operational expansion and business strategy are forward-looking statements. The words "believe," "may," "will," "estimate," "potential," "continue," "anticipate," "intend," "expect," "strategy," "future," "could," "would," "project," "plan," "target," and similar expressions are intended to identify forward-looking statements, though not all forward-looking statements use these words or expressions. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including but not limited to the factors, risks and uncertainties included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as such factors may be updated from time to time in our other filings with the Securities and Exchange Commission (the "SEC"), accessible on the SEC's website at www.sec.gov and the Investor Relations section of our website at www.rocketlabusa.com , which could cause our actual results to differ materially from those indicated by the forward-looking statements made in this press release. Any such forward-looking statements represent management's estimates as of the date of this press release. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change.

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