

NordSpace Successfully Tests New Engine Test Cell and Hadfield Rocket Engine, Prepares for First Flight from Canada

NordSpace is a Canadian space technology company building orbital launch vehicles, a commercial spaceport, satellite systems, and hypersonic defence products

ONTARIO, ONTARIO, CANADA, May 20, 2025 /EINPresswire.com/ -- At 3:45 PM EDT on Friday May 16th, 2025, NordSpace successfully tested both its new Darkhorse engine test cell and its third generation 3D printed Hadfield liquid rocket engine for the first time, marking a significant step towards



NordSpace - Darkhorse First Test

Canada's first commercial space launch. The Darkhorse test cell and all NordSpace engines and vehicles are designed and manufactured in-house at the company's Markham facility, leveraging advanced manufacturing techniques. The test ran for 7 seconds at NordSpace's propulsion test

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This test confirmed that we do have the right stuff, and that we will deliver this incredibly important sovereign launch capability for all Canadians. Assured access to space is a national imperative."

Rahul Goel, CEO

range, a company-owned secure site in Northeastern Ontario, successfully delivering nominal thrust, active cooling, and impulse results. Long duration tests are scheduled for the coming days, along with refinements to fuel mixture ratios and higher-pressure scenarios to test the limits of the new test cell and engines.

Founded in 2022, NordSpace is a leading Canadian space technology company developing orbital launch vehicles, a commercial spaceport, satellite systems, and hypersonic defence products. Its vehicles are the only known commercial liquid rockets being developed in Canada. This

successful test of the Darkhorse test cell and Hadfield Mk III engine lays the groundwork for the company's Tundra orbital rocket, as the test cell is specifically designed to integrate with NordSpace's turbo pump assembly in the next phase of propulsion development.

NordSpace recently announced that it had earmarked \$5M as a Phase A investment in Spaceport Canada, a new commercial spaceport being built by the company in Newfoundland and Labrador to support its own launch program as well as other launch partners. Expected to be the first operational commercial spaceport in Canada, the company will be breaking ground on Spaceport Canada this year and is planning its first launch from the spaceport location later this year of its Taiga suborbital launch vehicle. NordSpace successfully performed a fully integrated test of its Taiga rocket system on January 14, 2025. Since then, the company has completed Taiga Mk II, the flight-ready variant of the vehicle. The company's core capabilities in rocket propulsion will be leveraged in a dual-use capacity under its recently announced SHARP (Supersonic and Hypersonic **Applications Research Platform**)



NordSpace - Darkhorse First Test



NordSpace - Darkhorse First Test

defence products program, via its Sabre and Arrow vehicles.

NordSpace's CEO and founder, Rahul Goel, said "This successful test is not only a testament to NordSpace's unmatched technical competency, but also to the success of our new project management framework, design philosophy, and engineering mindset used to deliver results for complex projects on time and within budget. Success on the first try with countless potential sources of failure is not common in the development of rocket systems as complex as ours, but our team succeeded by prioritizing first principles engineering. This test confirmed that we do have the right stuff, and that we will deliver this incredibly important sovereign launch capability for all Canadians. Like the land, air, and sea, space is no longer some final frontier for Canada. Space is an essential domain we must unlock, and launch a capability we must own. Without it, we are jeopardizing not only our security, sovereignty and economy, but are also relegating Canada to a participatory instead of a leadership role on the world stage. We must not let this happen."

NordSpace's Chief Propulsion Engineer, Lakshmanan Velappan, said "It hasn't even been 3 years since I joined NordSpace as the first member of the team, back when we were still running tests

on Rahul's porch. Seeing how flawlessly Darkhorse and our new Hadfield engine performed on the first attempt filled me with pride, relief, gratitude, and excitement. It is an indescribably special feeling when something you build works, especially something so complex that there are no instructions or guidebooks for. We rely completely on our skill, judgement, and first principles approach. I have never been more proud of our team than I am today. This is just the beginning and what comes next is truly what will blow people away. We will get to space, and so much more."

Canada finds itself at a critical juncture with its sovereignty in space at stake. If Canada does not develop its own small-to-medium launch capabilities, the nation will continue relying on and paying foreign providers to deliver its payloads. These include small, often shoe-box sized, satellites increasingly serving critical functions for Canadians such as combating wildfires, providing connectivity, and ensuring national security. As the only G7 nation and the only 5 Eyes nation that has not conducted orbital launches, the necessity of capitalizing on this multi-billion dollar opportunity to develop a new industry for Canada comes with significant benefits - defence and national security, technological independence, job creation, economic development, and more.

NordSpace hosted the inaugural Canadian Space Launch Conference in Ottawa on April 29, 2025, with over 300 attendees from government, industry, and academia. Visit the <u>NordSpace</u> <u>Events</u> page to view recordings of all sessions and panels.

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