General Dynamics Land Systems successfully demonstrates ARV prototype to U.S. Marine Corps

U.S. Marines from various Light Armored Reconnaissance battalions perform maintenance exercises with Field Service Representatives during a demo for the Advanced Reconnaissance Vehicle on June 14, 2024, at Detroit Arsenal. (Photo by David Jordan, Program Executive Officer Land Systems.)

On track to deliver SIL2.0 and 30mm variant of Advanced Reconnaissance Vehicle

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STERLING HEIGHTS, Mich. – General Dynamics Land Systems announced today that it has successfully completed further

testing of its Advanced Reconnaissance Vehicle (ARV) Command, Control, Communications, Computers/Unmanned Aerial Systems (C4/UAS) variant with the U.S. Marine Corps. The ARV is designed for the Marine Corps' future Mobile Reconnaissance Battalions.

Principal test locations from March to December 2024 included the Michigan Technological University Keweenaw Research Center (KRC) in Calumet, Mich., and the U.S. Army's Ground Vehicle Systems Center (GVSC), Detroit Arsenal in Warren, Mich.

General Dynamics Land Systems' C4/UAS ARV variant is built to serve as the Marine Corps' "quarterback" on the mobile and multi-domain battlefield. It connects to an array of onboard and off-board sensors, plus UAS and, in the future, ground and water robotic systems. The General Dynamics Land Systems design ensures growth margins and modular open architecture to rapidly incorporate new technology as it develops. In anticipation of potential future requirements, it also incorporates the company's Next Generation Electronic Architecture, enabling artificial intelligence functionality and control of robotic systems.

Marine Corps-directed and company-led tests and demonstrations in 2024 included land mobility, maintenance, logistics and training systems, as well as automotive and mission-profile performance assessments.

A focus area in 2024 involved a maintenance and logistics capability assessment by Marines using the ARV. To this end, General Dynamics Land Systems has incorporated modern digital maintenance and prognostic monitoring systems in the ARV. In addition to Marine Corps-directed testing, General Dynamics Land Systems enhanced its demonstrations by introducing its next-generation Digital Training System (DTS), which eventually will enable ARV training at the individual, crew and unit levels for tactical operations and maintenance activities.

“The testing and demonstration activities last year helped us collect additional data to ensure we can meet or exceed the Marine Corps’ requirements for ARV, especially in the critical area of maintenance, logistics and training,” said Richard Trotter, ARV Program Director at General Dynamics Land Systems. “We are confident we can achieve key performance requirements in these areas as we wholistically design the strategic ARV capability and competitively position ourselves for the next phase of the program.”

Testing has included Marines from across the Light Armored Reconnaissance (LAR) and maintenance communities.

“Partnering with the Marines in the ARV testing and demonstrations provides very valuable feedback,” said Marc Shepard, ARV Program Manager at General Dynamics Land Systems. “Their collaborative, constructive feedback is invaluable as we aim for a transformational, 21st century solution.”

“We have said this before, and it is worth repeating: The ARV is highly mobile on land and in the water, allowing Marines to sense, communicate and connect to kill webs on the future battlefield like never before,” Trotter added. “Recent tests were some of the most extensive to date for us to trial our innovative technologies. We pride ourselves on delivering capabilities for today and also are thoughtful, deliberate and innovative about realizing the future vision of the Marine Corps. We look forward to continuing our long partnership with the Marines and contributing to their efforts to ensure that ARV is a transformational reconnaissance capability.”

In 2025, General Dynamics Land Systems will complete manufacturing and delivery of an ARV-30mm prototype for testing and evaluation. The company also will deliver a second Systems Integration Lab (SIL) for the ARV program. The primary purpose of the SIL, designed to replicate the interior of the company’s C4/UAS vehicle, is to validate the integration of the Command, Control, Communications, Computers and

Intelligence (C4/I) systems and software. It is envisioned that the SIL also will serve as an immersive experience for ARV mission operators and crew to train and simulate real-world missions with full, representative vehicle functionality.