Department of Defense Demonstrates Reusability of Hypersonic Test Vehicle

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The U.S. Department of Defense Test Resource Management Center (TRMC), in partnership with Naval Surface Warfare Center Crane Division (NSWC Crane), conducted a second successful flight of a fully recoverable uncrewed hypersonic test vehicle in March 2025, within three months of the first test in December 2024. This test campaign marks the Nation's first return to reusable hypersonic flight testing since the manned X-15 program ended in 1968.

In both tests, the Stratolaunch Talon-A hypersonic vehicle launched from the Roc carrier aircraft, flew over the Pacific Ocean and achieved speeds greater than Mach 5 before landing at Vandenberg Space Force Base. The landmark tests supported the ongoing TRMC Multi-Service Advanced Capability Hypersonics Test Bed (MACH-TB) project.

George Rumford, Director of the TRMC, stated, "Demonstrating the reuse of fully recoverable hypersonic test vehicles is an important milestone for MACH-TB. Lessons learned from this test campaign will help us reduce vehicle turnaround time from months down to weeks."

MACH-TB accelerates delivery of advanced hypersonic capabilities to the warfighter by providing DoD, other Federal agencies, industry, and academia the capability to affordably and rapidly conduct hypersonic experiments and test hypersonic system components.

NSWC Crane awarded the MACH-TB contract to Leidos through the Strategic and Spectrum Missions Advanced Resilient Trusted

Systems (S2MARTS) Other Transaction Authority (OTA) vehicle on behalf of the TRMC. As the prime contractor for MACH-TB, Leidos awarded Stratolaunch, LLC a competitive contract to provide flight test services for the program.

About TRMC

The U.S. Department of Defense Test Resource Management Center (TRMC) is a DoD Field Activity that reports directly to the Under Secretary of Defense for Research and Engineering within the Office of the Secretary of Defense. The mission of the TRMC is to ensure the readiness of DoD to experiment and test.