

SPHERE BRAKE DEFENSE PERFORMS 2-MINUTE BRAKE PAD SWAP WITH RCCTO DIRECTOR ON MTV AT ABERDEEN PROVING GROUND

ABERDEEN PROVING GROUND, MD (March 29, 2023) – In November 2022, SBD in support of Advance Concepts and Experimentation (ACE) office hosted demonstration for the Army Rapid Capabilities and Critical Technologies Office (RCCTO) at the Aberdeen Proving Ground to demonstrate our sphere brake bolt-on kit design on a Medium Tactical Vehicle (MTV) and Stryker Double-V Hull vehicle. The sphere brake system is part of an emerging industry of innovative auto technologies SBD is supporting for the US Army and Marine Corps.



Photo Source: Aberdeen Test Center; Static Display of the Spherical Brake Capability; Members from the Advance Concepts and Experimentation Office, Aberdeen Test Center and Sphere Brake Defense pose with the RCCTO Director Lt. Gen. Robert Rasch Jr. and RCCTO Deputy Director Mr. Stanley Darbro.

On November 17, Lt. Gen. Robert Rasch, Jr., Director of Army RCCTO; Mr. Stan Darbro, Deputy Director of Army RCCTO; CW5 Dewayne Casby, 3rd Infantry Division; Mr. Aaron Lewis, CEO of SBD; along with other key leaders from the Aberdeen Test Center (ATC) observed the sphere brakes installation on both test vehicles. The sphere brake kit is the only brake technology enabling maintainers to complete a brake pad swap without tools or wheel removal.



Photo Source: Aberdeen Test Center; A Soldier from the 3rd Infantry Division supports RCCTO Director in a Sphere Brake pad change on the MTVA1P2.

Lt. Gen. Rasch had the opportunity to perform the simplified task of removing and re-installing a brake pad on the MTV as CW5 Casby offered instruction. As Mr. Rob Monto, RCCTO's Deputy Director of the Critical Technologies Office and Advanced Concepts and Experimentation, started his timer, Lt. Gen. Rasch performed the maintainer-level task. The brake pad was removed and then re-installed in under 2 minutes. It currently takes several hours per wheel-end, along with special

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lifts, numerous tools, and trained technicians to change brake pads on most tactical ground vehicles.

The bolt-on sphere brake kits reduce weight by more than 30 lbs. per wheel-end, affording numerous opportunities to increase payload options in support of modernization priorities across the Army ground tactical wheeled fleet. “Working with a company like Sphere Brake Defense allows the Army RCCTO to bring enhanced capabilities to the Warfighter. Working through our Innovation Day process paired this approach to a unit of action”, said Mr. Robert Monto.

“It’s not every day you see a 3-star general perform a brake pad swap on a military vehicle,” said Mr. Lewis.

“The Spherical Brake project was selected as part of the Army RCCTO ACE office’s Army mission to rapidly develop, test, and transition advanced technologies to address high priority items for the Warfighter. This project’s goal is to enhance mission readiness for a full range of operations in complex environments to help mitigate operational gaps involving maintenance repair times that challenge our Warfighters readiness,” said Mr. Nathan Rozea, Army RCCTO ACE Office Project Lead on the Spherical Brake effort.

SBD conducted the demonstration toward the end of Federal Motor Vehicle Safety Standards 121 stopping distance testing, which was performed concurrently on both vehicles. In January 2023, the MTV and Stryker completed all track testing, hill hold evaluation, and structural integrity. The project is transitioning to the Marine Corps Systems Command (MCSC) in April 2023 for the execution of Reliability Qualification Testing (RQT) on the Amphibious Combat Vehicle (ACV) through Program Manager Advanced Amphibious Assault (PM AAA). This effort represents a strategic, combined joint effort across department agencies to bring novel innovative technologies to the Warfighter.



Photo Source: Aberdeen Test Center: The Stryker DVH A0 on the ATC test track during spherical brake FMVSS121.

About Sphere Brake Defense, INC

As a veteran owned small business based in Erie, PA, SBD is laying the foundation of the sphere brake industry. SBD is advancing the world to the simplicity of spherical brakes through integrity and innovation delivering simple solutions for our customers on time, every time.

Learn more at www.spherebrakedefense.com.