TSM Stryker/Bradley Corner

Improving the Bradley for the Urban Fight

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In November 2004, Lieutenant Colonel Gary Linhart, the Assistant TRADOC System Manager for Bradley at the time (TSM Bradley), and Lieutenant Colonel Andres Contreras, Product Manager – Bradley/113 (PM Bradley), conducted a Bradley survivability assessment for Operation Iraqi Freedom (OIF). They visited 10 Bradley-equipped battalions and spoke with a variety of Soldiers: from drivers to company commanders. More than 100 Soldiers were surveyed, and their responses provided useful guidance and direction for future Bradley fighting vehicle improvements (*Infantry* Magazine, November-December 2004, "The Bradley Fighting Vehicle: The Ultimate Assault Vehicle?").

Despite being a peerless system, suggestions for improvement to the Bradley family of vehicles have never been in short supply. Bradley users, from the recently polled OIF Soldiers to 20-year Bradley veterans, continue to guide development. PM Bradley, in partnership with TSM-Stryker/Bradley, has taken these suggestions and begun turning them into real materiel solutions. The following are upcoming improvements addressing a variety of factors.

Adapting to the Urban Fight

A large part of the fight in Iraq is an urban one. Suggestions from the field continue to come in long after LTC Linhart's survey. Here are some of the things units want their Bradleys

to have in a built-up environment:

Power Line Protection: Bradley crews continue to be wary of low hanging power lines. Most Soldiers who had been to Iraq recently reported low, damaged, or makeshift cables between buildings and across alleyways and streets. Often at or below turret level, power lines can be lethal to an unbuttoned Bradley commander (BC) or gunner.

Bradley Commander's Light: Improvised explosive devices (IEDs) continue to be a primary killer, and traffic control point (TCP) operations remain essential. Units need to be able to find potential dangers on dark roadside, and maximize stand off in high-traffic areas.

Responsive Suppression: Units surveyed wanted to be able to engage close-in targets quickly. They wanted a system that would perform similar to the COAX, but would be able to suppress within meters of the vehicle.

Rear Ramp Protection: While the turret, front, and sides of the vehicle can be protected with Bradley Reactive Armor Tiles (BRAT), there is no analogue for the back ramp. The danger to squad members in the back makes rear ramp protection a top priority.

Sight and Optics Protection: A large point of frustration for mechanized Soldiers in Iraq was the vulnerability of their optics. A well-placed stone could disable either the gunner's or BC's (Commander's Independent Viewer, or CIV. This is found on A3 models only) sights completely.

"BUSK"

In response to these concerns, TSM and PM Bradley have worked to develop the Bradley Urban Operations and Survivability Kit (BUSK). BUSK is a user-friendly, low cost suite of improvements to the Bradley fighting vehicle. While not yet complete, these improvements will be available to units in the very near future.

Power Line Protection: A solution to the power line threat was inspired by jury-rigged solutions from the field. (See Figure 1.) These light, no-conductive rails protect both the crew and the turret optics from low-hanging power lines. They can be installed and de-installed by a crew in minutes.

Figure 1 - Power Line Protection

Figure 2 - Commander's Light Automatic Weapon (CLAW)

Commander's Light Automatic Weapon (CLAW): By attaching a low-caliber machine gun to the CIV, we get superior suppression tied to top-notch optics. Targets can be engaged just a few feet away from the vehicle. Research and development has been done using a variety of weapons systems, including the M240B Machine Gun, M249 Squad Automatic Weapon, and the M231 Firing Port Weapon.

Rear Ramp Protection: This solution is still under development. A possible solution under investigation involves using the cage-style armor currently used on Stryker vehicles and M113s. This solution is easily repaired and replaced. Being lightweight, it also offers minimal interference with ramp function.

Sight Protection: The Bradley sight protection set protects both the gunner's sight and the CIV. Composed of a simple metal mesh frame, it attaches to the vehicle with a textile adhesive. It is light, easily stored, and easily installed. Disassembly takes mere seconds. It is designed to maintain a minimum distance between the optics and the screen, to reduce damage from debris.

These were just a few solutions being developed and implemented for the Bradley fighting vehicle. The genesis of every item was input from American Soldiers. The best way to improve this system is to hear from the user. Please send any suggestions or ideas to Jason.Toepfer@us.army.mil. As the TSM Bradley OIC, my job is to ensure needed improvements and upgrades become a reality.

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