

Stryker – Mobile Gun System

Executive Summary

- The Army deployed the Mobile Gun System (MGS) to Operation Iraqi Freedom prior to completion of the IOT&E and the full-rate production decision.
- DOT&E submitted an Early Fielding Report to Congress in June 2007.
- DOT&E concluded in its Early Fielding Report that MGS performance was not sufficiently mature for combat operations.
- The U.S. Army Operational Test Command will conduct the Initial Operational Test at Fort Hood, Texas, from October 20, 2007, to November 4, 2007.



System

- The Stryker Family of Vehicles consists of two basic variants: the Infantry Carrier Vehicle and the MGS.
- The MGS is undergoing a separate acquisition program because the system needs additional development.
- The MGS mission equipment includes:
 - M68A1E7 105 mm cannon system with an ammunition handling system
 - Coaxial 7.62 mm machinegun and a secondary M2HB, .50-caliber machinegun
 - Full solution fire control system with two-axis stabilization
 - Low-profile turret designed to provide survivability against specified threat munitions
- The MGS has a three-man crew.
- The system integrates the Driver's Vision Enhancer and Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance components as government furnished equipment.

- The MGS provides the crew with levels of protection against small-arms, fragmenting artillery, mines, and rocket-propelled grenades. Rocket-propelled grenade protection is provided by add-on Slat armor (flat steel stock arranged in a spaced array) not shown in photo.

Mission

- The Stryker Brigade Combat Team equipped with the MGS can create openings in walls, destroy bunkers and machinegun nests, and defeat sniper positions and light armor threats. The primary gunnery systems are intended to be effective against a range of threats up to T-62 tanks.
- The MGS operates as a three-vehicle platoon organic to the Stryker infantry company or as a single vehicle in support of a Stryker infantry platoon.

Activity

- The Army deployed the MGS to Operation Iraqi Freedom prior to completion of the initial test and evaluation and the full-rate production decision.
- On June 4, 2007, DOT&E provided Congress an Early Fielding Report.
- DOT&E monitored MGS combat performance.
- The Army Test and Evaluation Command completed additional coupon, ballistic hull and turret, and full-up system-level testing against the MGS in FY07. DOT&E expects that the Army will conduct additional Controlled Damage Experimentation and ballistic shock testing in early FY08.
- The U.S. Army Operational Test Command will conduct the Initial Operational Test at Fort Hood, Texas, from October 20, 2007, to November 4, 2007.

- An MGS platoon will execute tactical tasks and missions in a small-scale contingency environment against a representative threat.
- The test will consist of three events: force-on-force, combat live fire, and excursions.

Assessment

- DOT&E concluded in its Early Fielding Report that MGS performance was not sufficiently mature for combat operations. The configuration being deployed into theater was not yet operationally effective. The MGS design was improving, but new failure modes were continuing to emerge, which indicated the MGS was not yet mature in both the

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design and production processes. DOT&E included an interim, classified vulnerability assessment in the report.

- DOT&E recommended that the Army verify effectiveness of the seven planned corrective actions prior to deploying the system to combat.
- MGS performance in theater indicates the following trends:
 - Gunner sights help maintain situation awareness in urban terrain and are being used to identify Improvised Explosive Devices prior to detonation.
 - The 105 mm main gun is accurate.
 - Heat is a major concern. Vehicle internal temperatures have reached 130 degrees in the day and 115 degrees at night.
 - Some vehicle commander's are shutting down the Commander's Panoramic Viewer during the hottest time of the day (1200-1800) to minimize heat induced failures to the system.

- The 7.62 mm coaxial machine gun is functioning normally, but the gunner still has to exit the vehicle in order to reload or reduce stoppages.
- Crews are concerned about their ability to evacuate the vehicle in case of an emergency.
- Maintenance and specific parts flow are a unit concern. There is some concern that contractor logistic support is not sufficient because the contractors lacked MGS experience.

Recommendations

- Status of Previous Recommendations. The Army has addressed all previous recommendations.
- FY07 Recommendations. None.