

U.S. Army Delays RPG Defense

Service Forgoes Existing System To Seek One by 2011

By GREG GRANT

The U.S. Army is forgoing a high-tech defensive system that can shoot down rocket-propelled grenades — just as a powerful RPG that can penetrate even the thickest armor is starting to appear in Iraq.

The Army is passing up the Trophy active protection system, which has undergone live fire demonstrations by the Defense Department's Office of Force Transformation (OFT), to pursue an alternative system that won't be fielded until 2010 or later, Department of Defense sources said.

The enemy weapon that has newly surfaced in Iraq is the RPG-29, a powerful anti-tank munition with two warheads. Sources said the weapon is being smuggled by the Hizbollah terrorist group into Iraq from Syria, which resumed arms purchases from Russia last year. Israeli intelligence sources confirmed that the RPG-29 had been used by Hizbollah fighters in Israel in late 2005.

The RPG-29 is designed to defeat explosive reactive armor, whose small metal boxes detonate to disrupt the effects of incoming weapons, and slat armor, whose bolted-on cages keep weapons from hitting a vehicle's hull.

The new grenade packs two shaped-charge warheads: a small one to blow up the reactive armor or blow through the slats, clearing a path for a larger charge to strike the vehicle's hull.

The RPG-29 poses such a threat to American armor that the U.S. military has refused to allow the newly formed Iraqi Army to buy

HOW TROPHY WORKS

Rafael's Trophy active protection system is designed to shoot down rocket-propelled grenades and other munitions before they strike an armored vehicle. The Pentagon's Office of Force Transformation is testing Trophy aboard this Stryker armored personnel carrier.

Radar sensor
1 of 4, mounted fore and aft, left and right

Buckshot launcher
1 of 2, mounted left and right



DOD PHOTO

SHOOTING DOWN AN RPG

- 1 Trophy's 360-degree radar detects an incoming projectile.
- 2 System decides which launcher will react. Launcher aims and fires.
- 3 Buckshot shreds projectile.

TOP VIEW



SOURCE: Rafael

DEFENSE NEWS GRAPHIC BY CHRIS BROZ

them, fearing they will fall into the wrong hands, the top Iraqi ground-forces general told *The New York Times* last August.

There is only one currently available active armor system designed to defeat RPGs:

Israel's Trophy system, according to OFT officials, who are charged by Defense Secretary Donald Rumsfeld to experiment with novel weapons, technologies and tactics.

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RPG

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The Trophy system has been under development in Israel for a decade, ever since guerrilla RPG attacks exacted a heavy toll on Israeli armored vehicles in Lebanon in the 1980s. Officials said weapons such as the RPG-29 have forced the Israelis to look to high-tech means, instead of thicker armor, to protect their vehicles.

The Trophy was developed over the past decade by Israel's Rafael Armament Development Authority and Israel Aircraft Industries.

The system is composed of four radars, two launchers and a control unit. The radars pick up a threat up to 1,000 meters away and determine whether it's a tank round, RPG or antitank missile. At the appropriate distance, a launcher fires oversized buckshot that shreds the incoming shell.

Over the past eight months, U.S. and Israeli engineers have worked to speed up its 2008 fielding date. The first Israel Army Merkava 4 tanks will be equipped with Trophy in September.

OFT Assessments

OFT officials began studying active protection systems (APS) two years ago as part of its Sheriff project, an effort to field a combat vehicle with non-lethal and lethal weapons for urban warfare. After looking at all active protection systems being considered by the Army, they rejected all but Trophy.

DoD officials say the Army is slow to buy existing systems to protect vehicles in Iraq.

The Army's project manager for Future Combat Systems (FCS) Manned Systems Integration responded, "It is not as simple as grabbing something off the shelf and employing it."

"If everybody has their own flavor of the week [active protection system], we are bound for trouble," said Army Col. Charles Cotteau.

In March, Army officials involved with active armor development said that service leaders had forbidden them to talk about Trophy.

In an e-mailed statement in response to questions about Trophy, Army spokeswoman Maj. Desiree Wineland said, "The Army is looking at how to rapidly field the best available material solution to a valid requirement. We have an acquisition strategy that will allow us to field a best-of-breed APS solution across the Army — meeting the valid APS requirement, while at the same time supporting commonality and reducing the logistics and training impacts across the Army."

But the near-term FCS active protection system is not expected to begin production until 2010 at the earliest, said Col. Donald Kotchman, of the Army's Ground Combat Systems office. He said the Army will give the systems first to Abrams tanks and the Stryker Mobile Gun System, vehicles that spearhead urban attacks.

In an e-mailed statement, Col. Wade Hall, transformation strategist at the Office of Force Transformation said, "OFT has forged a close, working relationship with both the Army Futures Center and the Army Test and Evaluation Command on Sheriff development. Government engineers are working diligently to find a solution to pressing joint operational need."

"In Trophy, we have found a credible APS system that can meet that need today. OFT's objective is simply the fielding of experimental Sheriff/FSEP vehicles as rapidly as possible."

Despite support in the highest

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level of the Pentagon, Army officials are balking at pressing ahead with sending experimental Trophy-equipped vehicles to Iraq.

The OFT has fitted the Trophy on its Sheriff vehicle, a modified Stryker to be deployed to Iraq with the aim of determining what works and what doesn't in urban warfare. To disperse crowds, the Sheriff has a focused loudspeaker and millimeter-wave radar beam. To fight snipers, it has a gun that can automatically train to the location of a gunshot, allowing operators within the vehicle to use infrared sensors to spot and even fire on a threat.

The OFT started tinkering with Sheriff in 2004, and the project got a boost a year ago when an urgent request arrived from Marine Corps and Army officers in Iraq. In April 2005, Army Brig. Gen. James Hugins of Multi National Corps — Iraq asked the Pentagon to deliver for testing 14 vehicles that are referred to by the Army as Full Spectrum Effects Platforms. A top Central Command officer also signed off on the critical needs statement, then-Maj. Gen. John Castellaw, who now has his third star and is chief of Marine aviation.

In January, the Joint Rapid Acquisition Cell, the Pentagon body empowered to speed weapons to the battlefield, authorized \$31.3 million to ready three Sheriffs for Iraq as quickly as possible. Gordon England, deputy defense secretary, endorsed the decision.

But the Army, aside from buying three new Strykers, hasn't spent any other funding.

In fact, Army acquisition officials are lobbying Joint Rapid Acquisition Cell officials to allow the service to remove the active protection system and the millimeter-wave "active denial" systems that are at the heart of the vehicle.

Instead, the Army wants to field a Sheriff that eschews the active armor system for slat armor that is vulnerable to the new RPG.

Trophy Test

On March 30, the OFT conducted a live-fire demonstration of a Trophy-equipped Stryker at the Naval Surface Warfare Center in Dahlgren, Va. Testers fired two RPG-7s from 90 meters away at a Stryker moving 23 mph. The system acquired both rockets and decided the one from the right would miss. The launcher fired at the other one, disabling it within meters of the Stryker. Parts of the RPG continued forward and crashed into the vehicle without effect.

Army acquisition officials are discouraging any talk about Trophy. Col. John Koester, the Army's program manager for the JRAC funded effort, was the senior-most Army official to attend the Dahlgren demonstration and declined an interview request.

The Army is pursuing its own development program that would field an active defense system for armored vehicles around 2011.

Army officials remain tightlipped about their apparent opposition to active protection and denial technologies on Sheriff, but Pentagon officials say the reason is simple: The OFT vehicle threatens the service's signature FCS program.

"Once troops start playing with Sheriff and see what Trophy can do, they might want to change FCS," said one source.

Army officers say that is already happening, with troops returning from extensive combat in Iraq and starting to question or recommend changes to the FCS program.

Although Army officials contend they are committed to fielding an active defense system as part of FCS, they say it would be unwise to field any system that is less than 100 percent effective.

"The issue with any [active] armor protection system is the 60 percent solution is not acceptable," said Maj. Gen. Roger Nadeau, the Army's research chief.

But what worries Pentagon officials is that the Army knew about Trophy — some 60 officers and FCS officials visited Israel for briefings, but not a single one asked for more information on the system. The OFT stumbled onto the system last summer and immediately moved to negotiate a government-to-government technology agreement allowing American officers unprecedented access to all the top-secret data on the system.

To save time, the OFT asked Israel to ship one of its three Stryker vehicles that was fitted with Trophy to the United States for testing. That move shaved a month off the program. In testing over the past eight months, U.S. officials have proven Israeli claims regarding the vehicle's effectiveness, which has been demonstrated in some 150 inert and live rounds.

Army officials contend they won't clear Trophy for deployment. In fact, they now want to test the Stryker to make sure the weight of the various OFT add-ons doesn't threaten soldiers.

Trophy fans disagree.

"Trust me, the threat posed by the added weight is nothing compared to the threat from being hit by an RPG," one source said. ■