Mine Resistant Ambush Protected (MRAP) All-Terrain Vehicles (M-ATVs) Deploy to Afghanistan Through Joint Service Efforts

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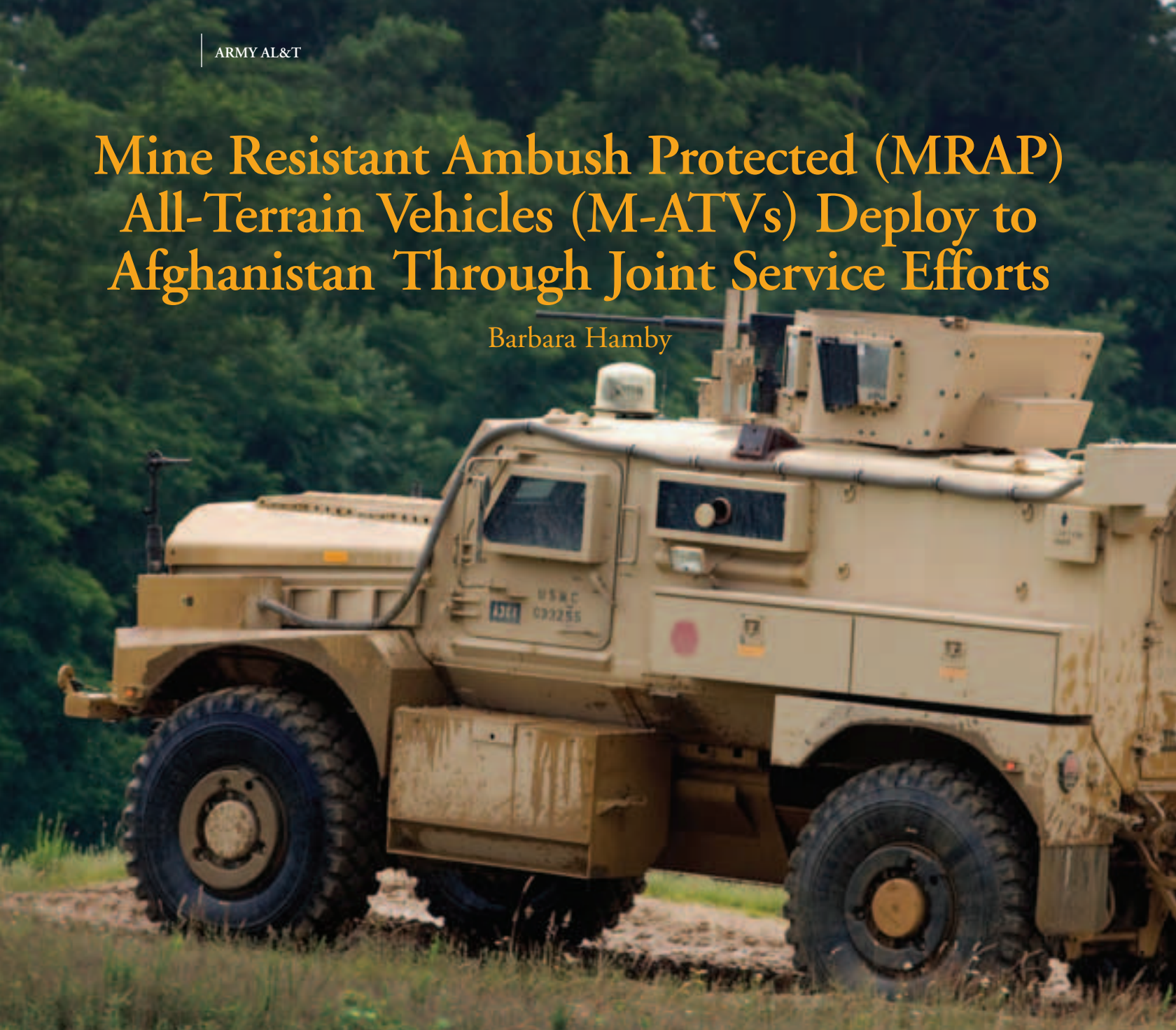

With unprecedented speed, the first of thousands of M-ATVs were issued to combat units in Afghanistan in December 2009, just 160 days after contract award. A joint service effort, the fielding of these lifesaving vehicles marked a significant milestone achieved by the MRAP Joint Program Office (JPO) to protect warfighters with a highly survivable and off-road-capable vehicle.

A Cougar MRAP modified with the ISS is put through the paces at ATC. The first ISS-capable Cougars were delivered to Afghanistan in August 2009 with good results. Other variants are quickly following the Cougar's lead and profiting from lessons learned with its improved suspension system. (Photo courtesy of MRAP JPO.)

"We pulled out all the stops to collapse the schedule and get these vehicles into theater," said BG Michael Brogan, Commander, U.S. Marine Corps (USMC) Systems Command and Joint Program Executive Officer (PEO) MRAP Program. "We are doing everything required to ensure that they are safe, that the risk assessments are complete, and that they're fully integrated and flown into Afghanistan."

Rapid Acquisition

Procurement of the M-ATV grew from an urgent requirement to provide troops a survivable, yet smaller and more maneuverable, vehicle that can travel off-road and navigate Afghanistan's difficult, mountainous terrain. Drawing from lessons learned from the procurement of baseline MRAPs for *Operation Iraqi Freedom* (*OIF*), the JPO devised and executed a rapid acquisition strategy.

The core effort began in June 2008 in response to a draft Army Operational Needs Statement for a lighter MRAP that could maneuver in the *Operation Enduring Freedom* (*OEF*) terrain. By August, a Request for Information was released to test the industrial base and see if the requirements were possible to develop. The government received 30 proposals. Two months later, the Joint Urgent Operational Needs Statement (JUONS) was signed and the source selection effort expanded to begin an intensive and rigorous requirements evaluation, with a Request for Proposal (RFP) released in December. The RFP provided an anticipated initial buy of 2,080 vehicles, with a maximum ceiling of 10,000.

Under this accelerated, best-value acquisition, offerors were required to meet three main screening criteria: vehicle weight was not to exceed 25,000 pounds; vehicles were to accommodate a crew of five; and vehicles had to pass ballistics tests. In January 2009, industry responded with eight offerors submitting proposals. Those selected in the first round in February received contracts to build and deliver two test vehicles that went through ride, mobility, and ballistic testing at Aberdeen Test Center (ATC), MD. Those vehicles that met basic requirements were accepted for armor, ballistic, and mobility testing.

On April 30, 2009, the government awarded five indefinite-quantity indefinite-delivery contracts for additional test vehicles. The competition included Oshkosh Defense, BAE Global Tactical Systems, BAE U.S. Combat Systems, Navistar Defense, and Force Dynamics (a joint venture between

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The acquisition effort for the M-ATV is unprecedented, even more so than the original MRAP effort. Production began in July 2009 and the first trucks were fielded to the USMC in Afghanistan on Dec. 6, 2009, just 160 days from contract award. (Photo courtesy of MRAP JPO.)

Force Protection Industries and General Dynamics Land Systems). Vehicle testing began immediately to provide data in support of making a best-value determination for up to 10,000 M-ATVs. A down-select decision was announced in June, with the contract award going to Oshkosh Defense.

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"The Source Selection Evaluation Board did an excellent job comparing industry proposals," said Kevin Fahey, PEO Combat Support and Combat Service Support. As the Source Selection Authority, Fahey added, "We incorporated lessons learned from MRAP and sent M-ATVs to home stations for training before deployment, ensuring that safe, effective, reliable, and supportable M-ATVs were delivered to our operating forces as quickly as possible."

"The M-ATV procurement is the result of an extremely comprehensive and rigorous source selection process, which appropriately weighed survivability, mobility, maneuverability, production capability, price, and other factors within the context of the urgent need for the procurement," Brogan said.

"The acquisition process determined the most capable and best-performing vehicle against stringent survivability requirements. Extensive test and evaluation with volumes of empirical data were produced, on which a 'best value' decision was based. It was detailed, thorough, and fair, and the results were reviewed by an Office of the Secretary of Defense peer review team made up of very senior contracting officials."

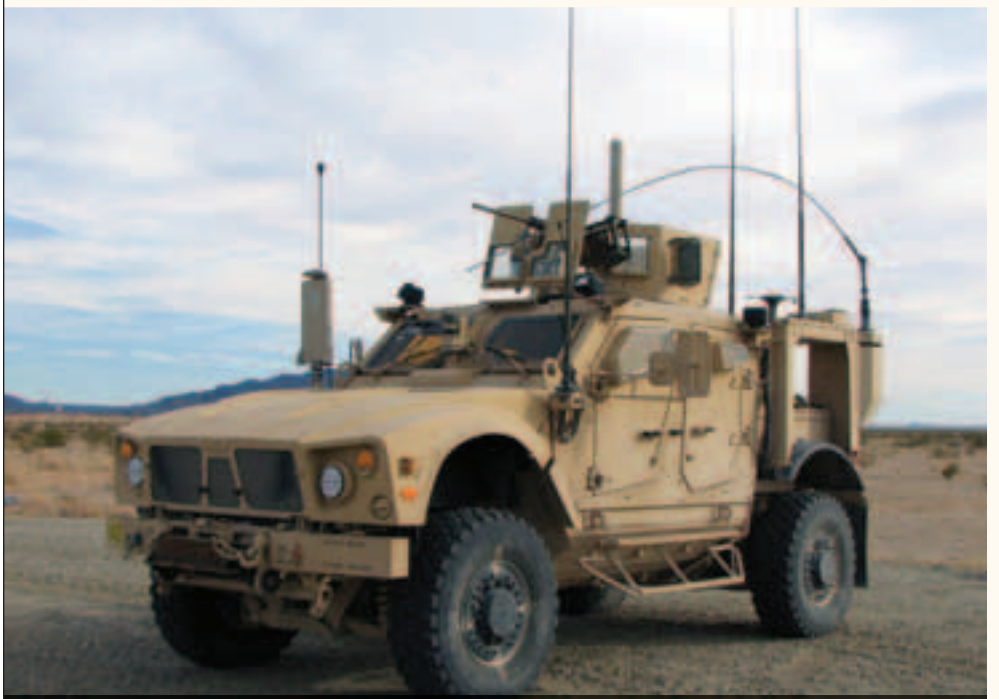
As part of the MRAP vehicle program, the M-ATV is a high-priority, accelerated acquisition program supporting overseas contingency operations. It retains the highest possible Defense Priority Rating, DX. The government is using the same fundamental acquisition strategy as the original MRAP program with one exception. In addition to relying on the existing JPO infrastructure to procure, test, field, train, and support the JUONS, the government has leveraged the resources of the U.S. Army Tank-automotive and Armaments Command Contracting Center to support the procurement.

Independent Suspension Systems (ISS) Modifications

Today, there are more than 500 M-ATVs in the Afghanistan theater of operations with more arriving daily. The vehicles are capable of driving up 60-percent inclines, in either forward gear or reverse, and can lean as much as 30 percent to the side. The suspension system keeps the axles from breaking by allowing each wheel to slide up or down as much as 16 inches as the vehicle drives over rocks or through ruts. Initial feedback on the M-ATV is positive. Reports from the field are that, "In addition to its ability to traverse a wide variety of terrain, its speed transforms it from simply a means of transportation to an offensive capability for the commander."

Since November 2006, the JPO has placed 22,882 MRAP vehicles on contract, including 6,644 M-ATVs. In January 2010, the Joint Requirements Oversight Council increased the MRAP family of vehicles requirement up to an additional 4,000 vehicles. The vehicle mix will be determined by operational commanders. Part of the calculus may include how effective ISS are working on baseline MRAPs.

The USMC began ISS modifications of existing Cougar MRAPs in the summer of 2009, with good results. The Oshkosh TAK-4 ISS was chosen as the



The procurement of the M-ATV derived from an urgent requirement to protect troops in *OEF* with a highly survivable and off-road-capable vehicle. (Photo by Isaac Rodriguez, Yuma Test Center, AZ.)

MRAP JPO Army PMs stand alongside a U.S. Air Force convoy escort crew in front of their M-ATV in Afghanistan. Left to right: LTC Coll Haddon, COL Kevin Peterson, TSgt Clarissa Walkup, LTC Jay Proctor, CPT William Minor, LTC Andrew Oderkirk, TSgt Robert Berrier, and SrA John MacLean. (U.S. Army photo.)

replacement for the Cougar's solid-axle suspension. TAK-4 has been used on the USMC's most mobile wheeled vehicle, the Medium Tactical Vehicle Replacement (MTVR), with great success. Due to the similarities of the MTVR and Cougar, the TAK-4 ISS was adapted to fit the Cougar with only minor changes required.

The ISS increases overall suspension travel from 6 to 13 inches, providing the Cougar with off-road capability. It also includes larger tires with a Central Tire Inflation System, allowing the operator to select the appropriate tire pressure to maneuver in harsher terrain. Another benefit of the ISS is the optimized steering components. Together, all the modifications enhance overall automotive performance, ride quality, payload capability, and maneuverability while continuing to provide MRAP levels of protection.

"The Cougar ISS greatly improves mobility to units operating in *OEF* and will help save more lives," said Kim Yarboro, Assistant Program Manager (PM) Cougar MRAP fleet. "It's allowing the warfighter to follow the enemy into the harshest terrain and do it faster and more comfortably than ever before."

With the first ISS-capable Cougars delivered to Afghanistan in August 2009, the flow continues as the pipeline fills. In all, more than 2,100 Cougars will be retrofitted with ISS. According to Dave Hansen, MRAP Deputy PM, other variants, such as the MRAP RG-31, RG-33, and MaxxPro, are quickly following the Cougar's lead and profiting from lessons learned with Cougars' improved suspension system. "We are seeking technical evaluation support from industry to look at all the solutions out there and to improve the handling and off-road performance in their trucks," Hansen said. "The ISS already in use are performing very well."

While both the suspension upgrades and M-ATV programs are on track, efforts to increase the speed of delivery are continually being navigated. Officials say the MRAP team embraces the challenge in its unwavering commitment and support to the troops. "No matter how hard we think we have it, or how hard we are working, the young men and women out in combat have it dramatically worse," said Paul Mann, MRAP Joint PM. "We will keep pressing until the warfighters all come home safely."

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