

Soldier Armed

M1117 ASV/MSFV Update

By Scott R. Gourley

Reset Activities

With more than 3,000 units in U.S. Army inventories, the combat proven M1117 Armored Security Vehicle (ASV) used by the U.S. Army Military Police (MP) Corps and the associated M1200 Knight used by Field Artillery observation teams have made significant contributions to combat operations in Iraq and Afghanistan over the past decade.

Activities surrounding the vehicle family continue to expand in 2012, with the recent go-ahead for the industry reset of returning combat platforms as well as the fielding of three new related vehicle variants that will serve as elements to the success of U.S. withdrawal strategies from Afghanistan.

The base M1117 ASV is a 4-by-4 wheeled armored vehicle that offers exceptional crew protection through the employment of multiple layers of armor that provide defense against medium-caliber, armor-piercing machine-gun fire, large artillery projectile fragments and land mines. The use of an all-wheel independent suspension system provides the ASV with superior mobility, agility, handling and ride quality, while a Textron Cadillac Gage dual-weapon 40 mm/.50-caliber turret on the Army's MP version enables all ammunition reload to be performed under armor and allows the crew to remain protected from enemy fire.

Speaking at a recent industry conference, COL William Boruff, U.S. Army project manager for Joint Combat Support Systems, pointed to a U.S. Army fleet portfolio consisting of approximately 2,900 M1117 ASVs and approximately 465 M1200 Knights.

Describing the ASV as "the mainstay for the MP corps," COL Boruff pointed to a projected completion of production activities in the fiscal year (FY) 2013 time frame as well as ongoing reset activities.

A significant recent program milestone involves the mid-October 2011 award to Textron Marine & Land Systems, an operating unit of Textron Systems, of a competitive contract by the U.S. Army Tank-automotive and Armaments Command (TACOM) to reset several hundred ASVs returning from theater.

Industry reset activities serve to complement parallel reset efforts under way at Red River Army Depot, Texas. In fact, in 2008, Textron Marine & Land Systems, in collaboration with Red River Army Depot, executed a six-vehicle ASV reset pilot program for TACOM, followed two years later by Textron's refurbishment of an additional 12 ASVs.

Although the award of the October 2011 industry reset contract to Textron was subsequently protested to the U.S. Government Accountability Office, that protest was denied in early January, allowing the industry work to begin.

According to Richard Valenti, vice president, business development and capture management at Textron Marine & Land Systems, the reset contract requirements call for "bringing the vehicles up to fully mission capable status—what the Army calls a -10/-20 reset."

"That includes a lot of preventive

maintenance checks, oil changes and things like that," he explained. "There is also a list of mandatory replacement parts: those things that, between Textron on the prototype and pilot programs, along with TACOM and their experience, have identified on the vehicle as things that should be replaced. For instance, experience has shown that we should replace all four tires on every vehicle that comes in.

"So that's part of the mandatory replacement list. We are also replacing those things that are typically damaged by what the Army calls Three-D—delayed desert damage. Those are things like hoses and rubber parts that are typically damaged in a desert environment."

In addition to the mandatory replacement parts, the reset program also tasks Textron with performing a complete inspection of each vehicle and identifying any needed work that goes above and beyond the standard full mission capable -10/-20 reset.

"That's called IROAN work—inspect and repair only as necessary," Valenti offered. "That element in the contract allows us to get funding for both labor and material as we identify those things that need to be replaced or repaired. Typically those things might include components that are damaged or missing [including armor



Soldiers from the 41st Infantry Brigade Combat Team prepare Caiman MRAP vehicles and M1117 Guardian armored security vehicles for a convoy security mission in Iraq in 2009.

U.S. Army/SFC Anita VanderMolen



The Mobile Strike Force Vehicle (MSFV) with Gunner's Protective Kit is a modified and updated version of a Textron Machine & Land Systems vehicle platform design, and allows for additional protection while still utilizing commercial off-the-shelf parts.

and structural damage and] would be covered by IROAN work. Each inspection gets reviewed by the government and approved prior to us doing any of the identified work."

Vehicle quantities identified in the reset contract include a base year of 392 vehicles, an option for 225 vehicles in year two and an option for 167 vehicles in year three.

"We deliver the vehicles back to the government here on site, and through the government transportation system they are then shipped to their fielding sites," Valenti explained. "The government has a fielding plan to issue these to units that have a requirement for ASVs, and we are working ... to make sure that the production schedule for reset fits well with fielding plans for those units, and those include a lot of National Guard units as well as active Army military police units."

COL Boruff noted that the majority of reset activities at Red River Army Depot and Textron will take place in calendar year 2013, adding that discussions were still under way at the Program Executive Office level concerning possible program management transition following completion of current production and reset activities.

The first Afghanistan national army MSFVs arrive in Afghanistan for deprocessing. The U.S. Army began fielding the MSFV to the Afghan national army in February.

Mobile Strike Force Vehicle

In addition to its numerous tactical contributions, the ASV is also making a significant strategic contribution by serving as the design foundation for the new Mobile Strike Force Vehicle (MSFV) that the U.S. Army started fielding to the Afghan national army (ANA) in February.

The MSFV is being provided in three variants: equipped with the standard 40 mm/.50-caliber machine-gun turret, an objective gunner protection kit (OGPK) and a raised hull ambulance configuration.

According to COL Boruff, current

plans call for building 352 of the turreted variant, 142 of the OGPK variant and 23 ambulance variants.

"This is the Afghan army's armor of the future," he explained. "This is what NATO has decided to give them. They will build around five battalion task forces with about 58 of these vehicles in each task force, along with about 72 other wheeled vehicles."

COL Boruff characterized the platform as "providing an optimum design for armored wheeled vehicles for the ANA." He added, "It is the most efficient and effective combination for mobility, protection, survivability and firepower."

"We basically leveraged all of the history of the ASV program and how it was designed for the ANA," said Mike Gelpi, vice president, land systems and life cycle support at Textron Marine & Land Systems. "But in terms of differences, the [MSFV] vehicle was 'stretched' by approximately two feet right behind the front fender well. That may not sound like much, but it really opens up the entire interior volume and allows additional spots for crew."

Noting that the current M1117 design only has places for three individuals, he added that the stretched MSFV with the OGPK has a 10-person capacity (eight crew, driver and commander); the 40 mm/.50-caliber turret





Armored vehicles move onto Forward Operating Base Shank, Afghanistan, as part of a convoy that carried soldiers from 10th Mountain Division's 3rd Brigade Combat Team to the base from Bagram Airfield.

MSFV has seven-person capacity (four crew, one person in the turret, driver and commander). The new ambulance configuration with a "higher roof" allows for litter transport.

Although the initial vehicles had been scheduled for arrival in Afghanistan in mid-January, a series of transportation and logistics difficulties delayed the arrival of the first six vehicles until February. Ongoing delivery should permit the planned fielding of the first *kandak* (battalion) around the end of March.

Enhanced Survivability

"In addition to the differences in size and stretch, one of the bigger issues involving improvements of the M1117 is on the survivability side," Gelpi said. "The ballistic protection [on MSFV] is the same as on the M1117, which is greater than that of MRAP vehicles, but now the mine-blast-survival capability on the ANA [MSFV] vehicles is the same as on MRAPs, and that is significantly more than [what] was on the M1117."

One important aspect of the MSFV enhanced survivability package involves raising the vehicle higher off the ground. Specific design improvements to the survivability goal include the use of slightly larger HEMTT [Heavy Expanded Mobility Tactical Truck] tires along with a different axle design. Taken together, the suspension features result in raising the vehicle by approximately 8 inches higher than the M1117.

"There are other changes on the in-

terior, related to occupant safety, that help with survivability," Gelpi said.

Asked whether the U.S. Army might be examining some of the survivability enhancements as a potential future upgrade to the M1117, he acknowledged that the military police community—service proponent for the ASV—has updated the system's capabilities documentation to reflect the higher level survivability package as a desire for future fleet modernization. In an industry briefing, COL Boruff noted recent modernization communications between his office and representatives with the Assistant Secretary of the Army for Acquisition, Logistics and Technology.

Paraphrasing this communication, he said, "Modernization of the ASV platform to meet the MP warfighter role of today—the Maneuver Center of Excellence, U.S. Army Military Police School and PM [product manager] ASV align to provide a modernized ASV platform to meet the MP warfighter [requirements] of the future."

"The ASV is going to be part of Army inventory until about 2025," he said. "That's a long time out there. ... ASV modernization is the MP school's number-one priority, so that will get a lot of emphasis, [and] we'll be able to work on that."

Acknowledging general industry concern about reduced funding in future Department of Defense budgets, COL Boruff told the audience, "We are going to do our best to maintain the platforms that we are going to have out there to 2025. We are going to look

at recapitalization programs [and] re-set programs because we have to be able to keep what we have in the fleet out there and running.

"What we are going to look at for the recap[italization] is increased survivability by upgrading the ASV protection level to a minimum of MRAP level I; upgrading the target acquisition for the turret; and meeting all the key performance parameters like net ready, transportability, lethality and mobility."

While the service has interest in expanding system survivability, Textron's Gelpi also sought to clarify the "misconception" that ASV does not have a V-bottom hull design.

"ASV M1117 does have a V-bottom and has done unbelievably well in all of its years of combat from a survivability standpoint," he said, "but we think that if it's good enough for the Afghan soldiers to have MRAP-level mine-blast protection, it should also be good enough for U.S. soldiers. So we strongly advocate and support the eventual retrofit of the enhanced survivability improvements to the M1117."

Characterizing the new MSFV as "a lot more than just a vehicle program," Gelpi noted the contract inclusion of "a lot of services for training the Afghan national army to operate and maintain the vehicle."

"The whole MSFV/ANA program is integral to the U.S. strategy in Afghanistan," he summarized. "As you might imagine, it is also integral to the U.S. exit strategy and trying to withdraw from that country, and part of that is to essentially teach guys who have never even driven vehicles how to operate and maintain a 15-ton combat vehicle. It is a challenge and a tall order, but we have a whole team of people in Afghanistan who are just beginning this training program for the Afghan national army." ★