



Turning up the V

They rock. They roll. And they currently hold the number one spot on the chart — the Department of Defense acquisition chart, that is. They're known as MRAP vehicles, MRAP being short for Mine Resistant Ambush Protected, and they are DoD's foremost countermeasure to roadside improvised explosive devices — or IEDs — that continue to menace American troops in Iraq and Afghanistan. The fielding of these life-saving vehicles has become a consensus priority — one for which Congressional members and DoD officials alike are cranking up the dials to 11.

The question is not whether they're effective or needed but rather whether they can be produced in sufficient numbers and deployed fast enough to blunt the threat. In tackling this question, the deputy under secretary of defense for industrial policy, in February 2007, called on the Defense Contract Management Agency's Industrial Analysis Center to perform an industrial capability assessment of the Marine Corps's planned acquisition of thousands of MRAP vehicles, the manufacture of which would involve some 40 American companies.

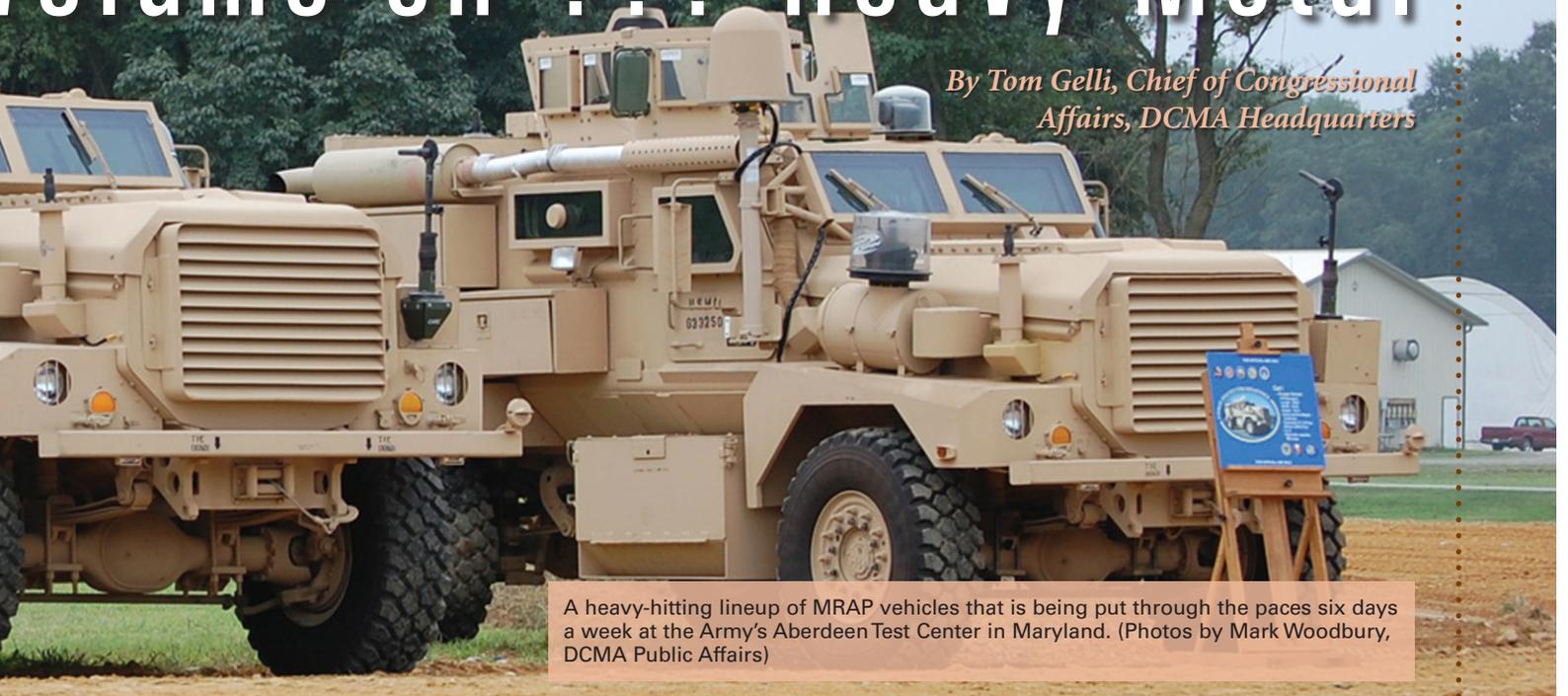
The IAC's 35-page assessment, which focused on American industry's capacity to meet the challenge posed by such a material-intensive initiative, was presented to Pentagon officials in April. The following month, Secretary of Defense Robert Gates made the

production and fielding of MRAP vehicles DoD's top acquisition priority and the third largest current acquisition program, behind missile defense and the joint strike fighter.

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Volume on . . . Heavy Metal

By Tom Gelli, Chief of Congressional Affairs, DCMA Headquarters



A heavy-hitting lineup of MRAP vehicles that is being put through the paces six days a week at the Army's Aberdeen Test Center in Maryland. (Photos by Mark Woodbury, DCMA Public Affairs)

The MRAP vehicle family currently comprises three types of vehicles, each with a different in-theater purpose and passenger capacity. These robustly armored models feature a V-shaped hull, raised chassis and blast- and bullet-resistant windows, all of which offer an elevated level of protection against mines, roadside bombs and small-arms fire.

Despite the weighty fortification, the vehicles can travel up to speeds of close to 60 mph on paved surfaces, though more typical operation would be on unpaved or secondary roads at speeds around 25 mph. Current plans call for the acquisition of nearly 7,800 MRAP vehicles, though the number may rise to more than twice that if the military services, as expected, opt

to increase their respective MRAP inventories.

Several hundred MRAP vehicles already have been pressed into service in Iraq and Afghanistan, and DoD continues to implement a fast-track fielding policy.

An MRAP vehicle is not your father's Oldsmobile that can be driven off the lot and onto main street. MRAP vehicles, because of their heft and mission requirements, must undergo rigorous automotive and survivability testing before they are considered troop-worthy. Such testing is conducted by the Army's Aberdeen Test Center at Aberdeen Proving Ground, Md., just a crab leg's length from the Chesapeake Bay. There, ATC technicians put the vehicles through the paces on a

2,000-acre test area scarified with pot holes, mud pits, washboard surfaces and slopes of varying severity.

Test drivers assess steering, handling, acceleration and braking. They also use a military version of a crash-test dummy to gauge the strains and forces passengers likely would have to withstand under operational conditions. Particular attention is paid to the effects on the head, neck, spine and pelvis. Evaluations are also conducted on gas mileage, interior noise and ventilation. Feedback based on the test results is funneled back to the manufacturers who make the needed adjustments.

Nine companies are currently under contract to produce the basic MRAP vehicles, which



Speaking to members of the media, Marine Corps Brig. Gen. Michael Brogan, joint program executive officer for the MRAP initiative, explains the importance of the fortified vehicles in countering the threat of in-theater roadside explosives.

are delivered to the Space and Naval Warfare Systems Center in South Carolina, where electronic components such as radios and radar are installed before deployment to theater.

The ATC began its intense MRAP testing in the winter of 2007, and, to meet the urgent need for fielding, is conducting operations around-the-clock six days a week. Army Col. John Rooney, commander of the ATC, keeps the test results under wraps but does not conceal his belief in the value and battle worthiness of the MRAP vehicles. "I can tell you with great confidence that these vehicles will save thousands of lives," he says. "There is no doubt that they will provide our troops a significantly higher degree of protection and ultimate survivability."

Though the breadth of the MRAP acquisition initiative crosses service lines, the lead role clearly belongs to the Marine Corps and to Marine Brig. Gen. Michael Brogan, commander of the Marine Corps Systems Command and the joint program executive officer for the MRAP initiative. "As the threat to our warfighters evolves, so must our innovation and use of technology to defend against those threats," he says. "In protecting our troops, these vehicles are proving highly effective. From a reliability standpoint, MRAP has exceeded requirements."

If there is a downside to an expanded presence of MRAP vehicles, it's that they may become a symbolic target for the enemy. Nonetheless, such a possible fallout is trifling compared with the increased protection the vehicles afford. And, this level of protection likely will be enhanced in phase two of the program, as the vehicles will be cast to counter the serious threat of explosively formed penetrators. But for now, speedy deployment of the first-generation MRAP vehicles remains the chief priority.

As Brogan said at a recent media orientation, "Our overarching goal is to field these vehicles as fast as possible."

It's a weighty challenge, indeed, but one that's music to the ears of American troops traveling the perilous beats of Iraq and Afghanistan. 

"In protecting our troops, these vehicles are proving highly effective. From a reliability standpoint, MRAP has exceeded requirements." — Brig. Gen. Michael Brogan



Model Behavior

They have names like *Cougar* and *Buffalo*. Some have tabbed them "HUMVEEs on steroids." Others simply refer to them as MRAPs. Yet, whatever moniker one wishes to apply, there is one label that almost everyone can agree on — that of lifesaver. Being produced under nine indefinite delivery/ indefinite quantity contracts, these Mine Resistant Ambush Protected vehicles fall into three principal categories with variant missions.

Category I — The most widely used model in the MRAP family, these are primarily used in urban combat operations. They can transport as many as six personnel.

Category II — The second-most common MRAP vehicle, they can transport up to 10 personnel and are used for multi-mission operations, such as convoy lead, troop transport, medical transport and ordnance disposal.

Category III — Relatively low in number but high in value, Cat IIIs are used in mine/explosive-device clearance operations. They can carry five or six personnel, depending on the amount of installed equipment.

Churning up the mud, a Category I MRAP vehicle negotiates the pocked and sloping terrain of a vehicle testing course at Aberdeen Proving Ground, Md.