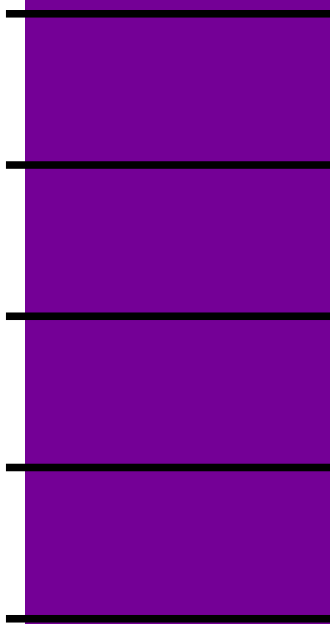


# Army Guide monthly



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**Defence Industry****Navistar Defense to Develop Lighter and More Mobile MaxxPro Variant**

WARRENVILLE, Ill. -- The U.S. Marine Corps today awarded Navistar Defense, LLC., a contract worth more than \$752 million to produce a lighter, smaller and more mobile variant of its International® MaxxPro™ Mine Resistant Ambush Protected (MRAP) family of vehicles.

The MaxxPro Dash maintains the survivability system used on all MaxxPro MRAP variants while also allowing for greater mobility in a smaller, lighter weight vehicle optimized for Afghanistan operations. A smaller turning radius and higher torque to weight ratio are among the improvements to mobility. MaxxPro Dash is also capable of accommodating additional uparmoring. Supportability and maintainability are maximized with a high-degree of commonality of parts among all MaxxPro variants.

"The Dash embodies everything we do: survivability, mobility and adaptability," said Archie Massicotte, president, Navistar Defense. "The MaxxPro MRAP vehicle platform can rapidly adapt to changing battlefield requirements."

Production of the MaxxPro™ Dash will begin in October at the company's West Point, Miss., plant with delivery of 822 units to be completed by February 2009. The vehicle will also be equipped with the MaxxForce™ D engine.

The MaxxPro Dash is the sixth variant in 12 months from Navistar's MaxxPro MRAP vehicle platform. Since the initial contract in May 2007, Navistar has won more than \$3 billion in contracts to produce a total of 5,222 MRAP vehicles. Navistar's MRAP platform includes the MaxxPro, MaxxPro Plus, MaxxPro ambulance, MaxxPro MEAP, MaxxPro Air Force and MaxxPro Dash.

The MaxxPro Dash will join Navistar's Medium Tactical Vehicles already in Afghanistan. More than 2,900 vehicles are in service with the Afghanistan National Police, Afghan National Army and the Iraqi Ministry of Defense, and in May 2008 Navistar was awarded a \$1.3 billion follow-on contract for more than 7,000 additional units.

**Defence Industry****Swedish Government Decision on Archer**

The Archer artillery system will soon be in service. The government has made a decision on continued development and procurement of this modified Howitzer 77B.

"With the new gun we will have one of the world's best systems with precision bombardment," says Thomas

Lindell, Acting Commander at the Artillery Regiment A9.



The decision is seen as an expression of Sweden's will to strengthen its artillery capability, and a sign of Sweden's commitment to intensified cooperation with Norway on national security.

The government considers that joint development and procurement of Archer together with Norway creates conditions for an improved ability to collaborate in international operations. There are also opportunities to share the costs of teaching and training soldiers and costs for logistics, maintenance and modification of the systems.

"All experience at international level underlines the need for modern artillery units," says Thomas Lindell.

The cooperation with Norway also includes procurement of the remote-controlled weapon station Protector.

The mandate of Parliament is required before Swedish procurement of this system. The government is expected to seek this mandate in its budget proposal for 2009.

**Archer Facts:**

- Dumper truck with ballistic protection
- Calibre: 15.5 cm (155 mm)
- Muzzle velocity: 945 m/s
- Range: 50 km with precision-guided shells
- Based on the Howitzer 77 B, but with a barrel 2 metres longer
- Top road speed: 70 km/h
- Crew: 3-4: vehicle commander, driver and 1-2 operators
- Ammunition: 21 projectiles carried on board the vehicle

**Contracts****General Dynamics Awarded 64.6 Million Euros for 100 RG-31 MK5E Vehicles by the Spanish Army**

VIENNA, Austria -- General Dynamics Santa Barbara Sistemas has been awarded a 64.6 million Euro (\$102 million) contract by the Spanish Government to supply RG-31 Mk5E mine protected vehicles for the Army. General Dynamics Santa Barbara Sistemas is one of four companies that comprise General Dynamics European Land Systems.

The contract calls for the delivery of 100 vehicles -- 85 Armored Personnel Carriers (APCs), 10 Ambulances and 5 Command Post variants -- plus integration of Remote Controlled Weapon Station (RCWS) turrets and ongoing integrated logistic support (ILS). Work under the contract is expected to be completed by 2009. The contract includes an option for a second phase for 80 additional vehicles that will include some manufacturing in Spain.

General Dynamics Santa Barbara Sistemas, as prime contractor, will provide program management, engineering and logistic support. BAE Systems Land Systems OMC of South Africa will supply the vehicles as a subcontractor to General Dynamics.

General Dynamics Land Systems-Canada (Ottawa) has a similar program with BAE Systems Land Systems OMC for this vehicle.

The RG-31 Mk5E is a 4x4 armored vehicle with a combat mass of up to 17,000 kg, including 3,500 kg of payload. In standard Armored Personnel Carrier configuration, this air-conditioned vehicle carries a crew of 10 (driver plus nine). It is in service with many other countries including the United States and Canada and has been operating in Afghanistan and Iraq.

Command Brigade and Below (FBCB2), a tank-infantry phone, a .50 caliber thermal sight, a power distribution box, a rear slave receptacle, an eye-safe laser rangefinder, and driver's vision enhancement.

This situational awareness package increases the M1A1 Abrams tank's fighting capability by providing soldiers an electronic graphic of the battlefield with icons for friendly and enemy forces, and increases the accuracy of the tank commander's .50 caliber machine gun.

These M1A1 tanks are slated for delivery to U.S. Army units beginning in October 2010. Work will be performed in Anniston, Ala.; Tallahassee, Fla.; Lima, Ohio; and Scranton, Pa., by existing General Dynamics employees.

## Defence Industry

### New Mastiff 2 vehicles to be rolled out



A B160million contract to deliver the new generation of Mastiff vehicles - the Mastiff 2 - has been announced by UK Defence Secretary Des Browne on a visit to NP Aerospace.

## Contracts

### General Dynamics Awarded \$34 Million for M1A1 Abrams Tank Upgrades

STERLING HEIGHTS, Mich. -- The U.S. Army TACOM Lifecycle Management Command has awarded General Dynamics Land Systems, a business unit of General Dynamics, a \$34 million delivery order for 30 M1A1 Abrams Integrated Management (AIM) main battle tanks. The contract includes an option for 30 additional AIM vehicles, bringing the total potential award value to \$69.5 million.

AIM is a joint effort to refurbish M1A1 main battle tanks involving the U.S. Army Project Manager for Heavy Brigade Combat Team, the TACOM Life Cycle Management Command, the Anniston Army Depot (Anniston, Ala.), and General Dynamics Land Systems. Under the AIM program, M1A1 Abrams tanks are completely disassembled and overhauled to a like-new, zero-mile condition. Refurbished tanks incur lower operational and support costs and report higher operational readiness rates.

M1A1s are configured with armor upgrades and additional mission-critical technologies to bolster crew situational awareness (SA). The SA package include second-generation Forward-Looking Infrared, Far Target Locate, Blue Force Tracking (BFT)/Force Battle

The Mastiff 2 vehicles, which will be built by NP Aerospace, have improved axles and suspension to cope with the harsh terrain; better thermal imaging for the drivers; explosive attenuating seats - providing better protection to the soldier on impact; improved armour; and greater crew capacity.

While visiting the facility in Coventry, the Defence Secretary praised the company for its outstanding job in transforming basic Cougar 6 x 6 vehicles into the sophisticated Mastiffs, and in providing Osprey body armour plates and MK 6A helmets to our Armed Forces in Afghanistan and Iraq.

Defence Secretary Des Browne said:

"The Mastiff is already a hero in Iraq and Afghanistan. Today's contract for Mastiff 2 will deliver a vehicle that is even better - improved thermal-imaging for the drivers, increased armour and specially designed seats that will give the soldiers that extra protection - it is the next generation of vehicles for our commanders on operations.

"NP Aerospace and its workforce are to be congratulated on the support they are providing to our Armed Forces - the equipment they deliver from body armour plates to helmets is saving lives on a daily basis."

NP Aerospace is a world-leader in the production of non-personnel equipment and armoured vehicles designed to protect military personnel in combat environments. The

firm also manufactures state-of-the-art full body armour suits worn by our bomb disposal operators, complete with integral air-conditioning that allows wearers to operate in high temperatures.

The Prime Minister Gordon Brown announced in December 2007 the intention to buy an additional 170 Mastiffs, which are now Mastiff 2. The procurement of over 150 Ridgback vehicles (announced in December 2007) represents a further spend of over B150million on protection for British forces.

### Defence Industry

## Poland to spend \$24.6 bln for army modernization by 2018

By 2018 Poland will spend 60 billion zlotys (roughly 24.6 billion U.S. dollars) to modernize its armed forces, Defense Minister Bogdan Klich said Monday.

A total of "60 billion zlotys spent to modernize the army is the limit of our financial capacities, but not of our dreams," the minister said while inaugurating the 16th International Defense Industry Fair in Kielce, southern Poland. Such outlays would make it possible to transform the Polish armed forces into a modern army," the minister stressed. We want to launch several new programs to modernize the armed forces in the long term," Polish news agency PAP quoted Klich as saying.

The minister also intends to launch a program to equip the army with modern helicopters and another to build new naval ships. Several other modernization programs are currently being worked on. In August the Polish government announced Poland would switch from a conscript to fully professional military numbering 120,000 personnel from 2010. Present at the fair are nearly 400 firms from 22 countries. The Kielce exhibition is the third biggest event of the type in Europe.

### Defence Industry

## BAE Systems Launches New Variant of South Africa's Most Successful Export Mine Protected Vehicle



CAPE TOWN, South Africa -- BAE Systems has launched the newest version of its acclaimed RG series of mine resistant personnel carrier vehicle, the RG31 Mk6E, which will make its debut at the African Aerospace & Defence 2008 show in Cape Town (17-21 September).

Since receiving a Canadian armed forces order for RG31 Mk3 vehicles in 2003, the Benoni-based company's RG-series of products have boosted South African exports by more than ZAR3.5 billion (\$430 million) with a steadily increasing series of additional orders for vehicles, spares and support from new customers around the globe. It has also created over 300 news jobs at its factory near Johannesburg and many more throughout its supplier network.

"We are confident that this latest development, will further entrench our South African business as the world's leader in mine protected vehicle technology," said Johan Steyn, Managing Director of BAE Systems Land Systems South Africa.

"The RG series builds on the three decades of experience we have gained in South Africa, through vehicles such as the Casspir, Mamba and Mfezi. Its success is a result of our ongoing investment into ever improving the vehicle's protection levels. We achieve this by applying new concepts and designs influenced by customer and operator feedback and simulation," he explained.

New seats provide enhanced safety and protection.

Among the latest developments incorporated in the RG31 Mk6E are new anti-mine seats. These provide enhanced protection to the occupants from lumbar spinal injuries which can be caused by the shock-waves associated with land mine detonations. The seats incorporate shock attenuation crushable elements developed by BAE Systems in South Africa. Tests have shown that these absorb some of the vertical impulse associated with mine blasts, reducing the likelihood of injury during large landmine explosions.

The seats are mounted to the side of the vehicle in such a manner that they can move freely to enable the crushable elements to absorb the energy but without moving unnecessarily during normal operation. The seats are retrofittable to earlier variants of the RG series vehicles and are cheaper than earlier versions.

The RG31 is a 4x4 mine protected vehicle with a V-shaped hull that protects the crew against anti piercing (AP) rifle fire, anti-tank mine detonations and a wide variety of Improvised Explosive Devices (IEDs). In standard Armoured Personnel Carrier configuration, this air-conditioned vehicle carries a driver and nine troops. Its modular interior allows it to be configured for use in many other tactical applications.

Since 2004, BAE Systems has sold more than 2,200 RG31 vehicles, including a series of major orders for the US military -- which operates both the RG31 and its stable-mate, the RG33 -- in Afghanistan and Iraq. Of these, more than 1,300 RG31 mine-protected vehicles have been delivered to the US and Canadian forces. Another 984 RG31 Mk5E vehicles are currently on order with production underway at Benoni and partners in the US.

The US RG31s are manufactured by BAE Systems in South Africa and under licence by General Dynamics Land Systems Canada. Similarly, the US RG33s are manufactured under licence by BAE Systems' Ground

Systems Division in the USA. The South African company earns royalties on each of its licence-built vehicles.

In addition to ongoing US orders, several European countries are expressing interest in RG31 mine protected vehicle for their forces.

BAE Systems is the premier global defence and aerospace company delivering a full range of products and services for air, land and naval forces, as well as advanced electronics, information technology solutions and customer support services. With approximately 100,000 employees worldwide, BAE Systems' sales exceeded US \$31.4 billion in 2007.



## Contracts

### BAE Systems Secures \$742 Million U.S. Army Contract for Bradley Vehicles and Spare Parts



YORK, Pa. -- BAE Systems, under a \$742 million U.S. Army contract, will remanufacture more than 300 Bradley vehicles with additional armor to protect soldiers.

The contract is an option to a previously awarded contract for work on 252 Bradley vehicles.

The award brings the total value of BAE Systems' 2008 Bradley remanufacturing contracts to \$1.3 billion for 578 vehicles.

Under this award, BAE Systems will remanufacture an additional 189 M2A3 vehicles, 115 M3A3 vehicles and 22 M3A3 Bradley Fire Support Team Vehicles in conjunction with the Red River Army Depot through a public private partnership.

Initial disassembly and subsystem rebuild will be performed at the depot, with final disassembly and structural modifications completed by BAE Systems in Fayette County, Pennsylvania. Final assembly, integration and test will be conducted at the company's facility in York, Pennsylvania.

Bradley vehicles under this contract will be equipped with Improvised Explosive Device Armor, Bradley Urban Survivability Kits and several engineering changes designed to increase soldier survivability. In addition, 51 M2A2 vehicles will be converted to the M3A3 configuration. The company will also provide more than 200 different types of spare parts in varying quantities.

"BAE Systems and Red River Army Depot are committed to upgrading and returning Bradley vehicles

to combat ready status," said Andy Hove, vice president of Combat Systems Programs for BAE Systems. "These vehicles will be equipped with the latest survivability enhancements to provide maximum protection to the soldiers in the field."

Work under the contract will begin immediately by the existing workforce, with deliveries ending in February 2011.

The contract is managed by the Army's TACOM Life Cycle Management Command.

Bradley Combat Systems continue to provide outstanding survivability, mobility and lethality to U.S. soldiers in close-combat urban situations as well as in open-combat. The Bradley fulfills five critical mission roles – infantry fighting vehicle, cavalry fighting vehicle, fire support vehicle, battle command vehicle and engineer squad vehicle – for the Army's Heavy Brigade Combat Teams.

BAE Systems is the premier global defense and aerospace company delivering a full range of products and services for air, land and naval forces, as well as advanced electronics, information technology solutions and customer support services. With approximately 100,000 employees worldwide, BAE Systems' sales exceeded \$15.7 billion (US \$31.4 billion) in 2007.



## Defence Industry

### Army Fires First Round from Cannon on FCS chassis



YUMA PROVING GROUND, Ariz. -- The Future Combat Systems program successfully fired the first artillery projectile from the manned ground vehicle non-line-of-sight cannon prototype.

The successful firing of the projectile is a milestone for the program, said Lt. Col. Robert McVay, Army product manager for NLOS-C.

"This marks the first 155mm round fired from a fully automated howitzer mounted on an FCS hybrid-electric chassis and remotely commanded through its on-board computers and controls," he said.

The NLOS-C has the ability to rapidly deliver precision munitions in both urban and conventional battle space, officials said, adding that it is the lead prototype in the Army's family of eight FCS manned ground vehicles.

Advanced FCS technology provides the two-man artillery crew with the capability to rapidly deliver highly accurate sustained fires for close and destructive fires. That technology includes a fully automated ammunition loading system, improved accuracy through on-board projectile tracking, and the FCS network and sensors.

A total of eight NLOS-C prototypes will be produced between 2008 and 2009. All will undergo rigorous testing, safety certification and evaluations at various Army test facilities, officials said. They said the NLOS-C prototypes will be used for testing and evaluation of not only the artillery system, but also the MGV common chassis and technologies.

The NLOS-C P1 will fire an additional 500 rounds through early 2009 to obtain a safety release that will allow Soldiers to move, shoot, and communicate from an NLOS-C in spring 2009, officials said. Beginning in 2010, Soldiers at the Army's Evaluation Task Force are scheduled to receive the first of 18 NLOS-C platforms. The AETF will put those vehicles through combat scenarios to provide lessons learned that will be used to enhance and finalize design for the final production NLOS-Cs and the rest of the MGV family.

### Defence Industry

## Kongsberg Books \$15M CROWS II Contract with US Army



WASHINGTON --- Last week, the US Army issued Kongsberg Defence & Aerospace AS a contract valued at \$15 million for additional PROTECTOR Remote Weapon Stations (RWSs) to be integrated into the Vanguard Sniper Defense System and manufactured in Johnstown, PA.

This order is part of the existing \$1.4 billion Common Remotely Operated Weapon Station (CROWS II) framework agreement signed by the US Army in August 2007.

Under this latest contract, the CROWS II will be included with the Vanguard Sniper Defense System for the US Army's Mine Resistant Ambush Protected (MRAP) vehicles. The Vanguard System improves greatly on Soldier survivability and capability to respond to sniper fire in combat. KONGSBERG's PROTECTOR Lite with similar capabilities as the CROWS II is already in use on vehicles by the US Army in Iraq and Afghanistan.

"This is another success story for Kongsberg's Protector Family of Remote Weapon Stations," said Knut Saeter, VP of Kongsberg Defence and Aerospace in Alexandria, VA. "The Kongsberg CROWS II now is being employed in the same effective way as our M240/M249 Protector Lite, which has been in active service in both Iraq and Afghanistan since early 2007 as part of the Vanguard anti-sniper system."

Headquartered in Norway, and with manufacturing facilities and offices in the US, KONGSBERG is a supplier of high-technology systems to the defense and aerospace industry specializing in anti-ship missiles, command and weapons control systems and communications systems. KONGSBERG is the leading supplier of remote weapon stations worldwide, providing 16 countries with the PROTECTOR Family of RWSs.

### Exhibitions

## Denel Unveils New Weapons at South African Show

South Africa's Denel Group showed a range of new defence products and systems for the first time at Africa Aerospace & Defence (AAD2008) that took place in Cape Town last week.

Following is a brief outline of each of the systems for which more detailed information is available in the form of individual news releases with photographs.

### 1. Denel Land Systems: 60mm Breech Loading Long-Range Mortar

As part of its development of the New Generation Infantry Combat Vehicle (ICV) for the South African Army, Denel Land Systems (DLS) unveiled its unique 60mm breech-loading long-range mortar system, designated M10-BLLR, at AAD2008.

The 'Badger' ICV, based on the Patria platform, was also on display at the show.

The new M10 BLLR utilises the ballistic system of the renowned and proven of the DLS M6 long-range mortar.

The M10 mortar system with a range of 6000m (at sea level) is a world-first for this kind of weapon. It is also unique in respect of elevation: from -5Be to +70Be, which allows it to be employed in a direct fire application.

An important advantage is that it can launch most types of standard 60mm mortar bombs, although it was designed for Denel's own long-range mortar bombs. It also features a load-assist mechanism.

### 2. GI-30: 30mm CamGun

Also part of the development contract for South Africa's new generation infantry combat vehicle, Denel Land Systems (DLS) publicly showed its GI-30: 30mm CamGun for the first time.

The unique GI-30 is an externally driven electro-mechanical cannon, utilising a drum-cam to cycle the breech to chamber rounds and extract spent cartridges. This results in minimising gasses in the confines of a turret and facilitate controlled firing rate. DLS designed the GI-30 to fire link-less 30mm x 173 ammunition through a dual feeder – a world-first for this kind of weapon.

Another unique feature is that of 'next round selection'. Having two feeders, for general ammunition and specialist types, the weapon allows the operator to select a specific round, without first firing off or ejecting an unwanted round.

### 3. SS77 compact general-purpose machinegun

The SS77 Compact machinegun from Denel Land Systems (DLS) is based on the trusted and proven late 1970s design - as suggested by its SS77 name.

Based on the building blocks of the fully qualified 7.62mm standard model, the new SS77 Compact is ready for series production. The weapon is highly modular in many respects. This actually allows for its conversion to a 5.56mm Compact in a matter of minutes – by using the components of the DLS 5.56mm Mini-SS.

With a shorter barrel and telescopic stock the 7.62mm weapon is now 150mm shorter and weighs only 9 kg without specialised sighting systems.

A major difference with its standard predecessor is the SS77 Compact's natural balance. With an easily detachable telescopic butt and a pistol grip on the Picatinny rail under the barrel, the weapon has the distinct feel of an ordinary assault rifle. Unclipping the butt improves handling in confined spaces or during parachute jumps and exiting vehicles.

DLS believes the compact weapon is ideal for the modern soldier in many parts of the world – who is often light in weight and small in stature – and who is engaged in close combat in urban and jungle situations.

■