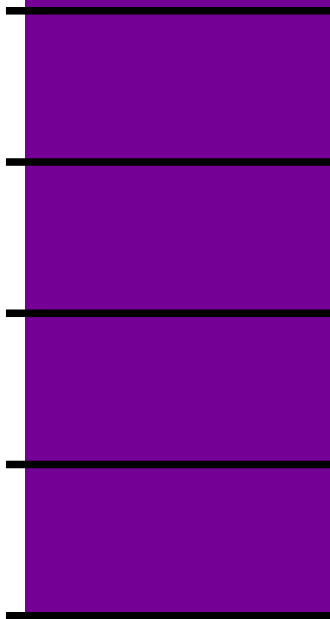


# Army Guide monthly



## # 11 (134) November 2015

- **\$245.3 Million U.S. Army Contract to Continue M109A7 Production**
- **Lockheed Martin Precision Munitions Complete Reliability Tests**
- **New Contracts To Boost Denel's Armoured Vehicle Business**
- **Oshkosh Next Generation of Light Vehicles Provides Unprecedented**
- **Rheinmetall Wins New Order for Tank Ammunition Worth Around EUR20 M**
- **BAE Systems Team Awarded Development Contract for U.S. Marine Corps ACV 1.1 Program**
- **AT Communication is pleased to announce the AT GNSS-01 Multi System GPS Receiver**



## Defence Industry

### \$245.3 Million U.S. Army Contract to Continue M109A7 Production



BAE Systems received \$245 million from the U.S. Army to complete the low-rate initial production (LRIP) of the M109A7 self-propelled howitzer and M992A3 ammunition carrier.

The U.S. Army awarded BAE Systems a contract option worth \$245.3 million to complete the low-rate initial production (LRIP) of the M109A7 self-propelled howitzer and M992A3 ammunition carrier.

“The success of this program is directly attributable to the partnership between the Army and BAE Systems,” said Adam Zarfoss, director of Artillery and Bradley programs at BAE Systems. “We’ve worked as a team to bring this much needed enhanced combat capability to the soldier to address immediate needs while providing a platform that can support future growth as requirements evolve.”

The M109A7 program is a significant upgrade over the vehicle’s predecessor, the M109A6 Paladin Self-Propelled Howitzer. It uses the existing main armament and cab structure of the M109A6, but replaces the vehicle’s chassis structure with a new design that increases survivability and allows for the integration of Bradley common drive-train and suspension components. Additionally, the system leverages technologies developed under the Crusader and Non-Line-of-Sight Cannon programs such as a 600 volt on-board power generation, distribution and management system, coupled with high-voltage gun drive and projectile ramming systems.

The state-of-the-art “digital-backbone” and power generation capability provides significant growth potential for future payloads as well as accommodating existing battlefield network requirements. The upgrades ensure commonality with the existing systems in the U.S. Army’s Armored Brigade Combat Team, including the BAE Systems-built Bradley Fighting Vehicle and Armored Multi-Purpose Vehicle.

BAE Systems was awarded a one-year base contract for the M109A7 in October 2013, and the first of two option year awards to produce an additional 18 vehicle sets in October 2014. The current exercise is for the second option year to produce an additional 30 sets. One set includes an M109A7 Paladin Self Propelled Howitzer (SPH) along with its battlefield companion, the M992A3 Carrier Ammunition, Tracked. With all two options exercised, BAE Systems will deliver a total of 66 vehicle sets plus one additional SPH and associated kits, spares, and technical documentation to complete the LRIP

phase. The U.S. Army has a total acquisition objective of 580 vehicle sets.

Work on the M109A7 is currently underway at Anniston Army Depot, Alabama and BAE Systems’ York, Pennsylvania, and Elgin, Oklahoma, facilities.



## Defence Industry

### Lockheed Martin Precision Munitions Complete Reliability Tests



DALLAS -- Lockheed Martin’s Army Tactical Missile System (ATACMS) and Guided Multiple Launch Rocket System (GMLRS) Unitary munitions recently underwent successful stockpile reliability tests. All rockets were launched from a High Mobility Artillery Rocket System (HIMARS) at White Sands Missile Range, New Mexico.

The tests included eight GMLRS rockets that were conditioned at hot and ambient temperatures. The ATACMS Unitary missile, which was the current production configuration, was conditioned hot for the test. The HIMARS launcher can fire ATACMS and GMLRS munitions ranging between 15km and 300km.

The flight tests, which were part of the U.S. Army’s tactical munitions reliability program, were conducted using simulated targets. Soldiers were inside the HIMARS’ Improved Armored Cab, where they initiated the launches.

“Lockheed Martin’s HIMARS, ATACMS and GMLRS precision fire solutions provide critical, quick-strike capabilities to U.S. and allied forces worldwide,” said Ken Musculus, vice president of tactical missiles at Lockheed Martin Missiles and Fire Control.

In service since 2005, HIMARS brings MLRS firepower to a wheeled chassis. It carries a single six-pack of rockets or one ATACMS missile, and can launch the entire MLRS family of munitions. It is C-130-transportable and can be deployed into areas previously inaccessible to heavier launchers.



## Contracts

### New Contracts To Boost Denel's Armoured Vehicle Business

Denel Vehicle Systems has concluded a contract of more than \$900-million with NIMR in the United Arab Emirates for the development and supply of advanced mine-protected vehicles.

This contract for N35 is one of the largest received by Denel Vehicle Systems (DVS) in recent years and will provide work for two of the company's major divisions for the next 24 months.



Zwelakhe Ntshepe, Group Executive Business Development says the new contract confirms Denel's leadership role in landward mobility and mine-protected vehicles. It is one of several contracts awarded to DVS since it joined the Denel Group earlier this year.

"We are delighted to work with NIMR, one of world's leading manufacturers of wheeled armoured vehicles," says Ntshepe. "There is a strong synergy between our companies and products and we are confident that we can, together, develop and improve the N35 to be among the best in its class."

The N35 – formerly known as the RG-35 – is an armoured vehicle with superior mine protection and combat capabilities and can be used in command, ambulance and recovery roles.

Ntshepe says the contract with NIMR follows on the awarding of several other contracts to Denel's landward defence business in recent months amounting to over R1 500m in total. These are

- The OMC division, within Denel Vehicle Systems specialises in wheeled armoured and mine-protected vehicles, received a development contract for the N35 from NIMR.
- A production contract for 24 RG-31 mobile mortar platform (MMP) vehicles.. The contract includes vehicle manufacture and technical support and will be delivered in the next 12 months.
- Contracts from Armscor for maintenance of - and the supply of spares for both combat and support vehicles.
- The Gear Ratio division, within Denel Vehicle Systems is working on a contract from NIMR for the assembly of driveline components.
- A contract was also concluded with Steloy Castings for components used in the new Transnet electric locomotives.

## Defence Industry

### Oshkosh Next Generation of Light Vehicles Provides Unprecedented

For the first time in company history, Oshkosh Defense, LLC, an Oshkosh Corporation (NYSE: OSK) company, will be exhibiting at the Dubai Airshow, November 8 – 12, 2015, in Dubai, United Arab Emirates. Oshkosh offers a full range of leading-edge military, security and airport fire fighting vehicles to serve customers throughout the Middle East Region, including the highly transportable Light Combat Tactical All-Terrain Vehicle (L-ATV), which was recently selected by the

U.S. Army and Marine Corps to replace aging up-armored HMMWVs.

Today's conflicts demand military vehicles with the protection, mobility and transportability to serve a full range of missions and unpredictable environments. The Oshkosh L-ATV combines proven automotive technologies, Mine Resistant Ambush Protected (MRAP)-level protection and extreme mobility in a light-weight, highly-transportable profile. The L-ATV offers armed forces around the globe next-generation capabilities that no other vehicle can match.

In August 2015, after extensive U.S. Government testing and evaluation, the U.S. Army and Marine Corps selected the Oshkosh L-ATV as the winner of its Joint Light Tactical Vehicle (JLTV) program. Under the JLTV contract, Oshkosh will produce and deliver up to 17,000 JLTVs for the U.S. Army and Marine Corps. The JLTV program is scheduled to achieve full rate production within three years.

"As future battlefields generate new, asymmetrical threats, troops will require a scalable, protected all-terrain vehicle to perform their missions – wherever they may be," said Bill Mooney, regional vice president of Middle East and North Africa for Oshkosh Defense. "The Oshkosh L-ATV provides an entirely new generation of light vehicles with unprecedented levels of off-road mobility, transportability and survivability. The extensive testing and evaluation proves, without a doubt, that it's the world's most capable tactical wheeled vehicle."

Roughly one-third lighter than the Oshkosh MRAP All-Terrain Vehicle (M-ATV), at the same protection level, the L-ATV weighs less than 6,350 kg at curb weight. The Oshkosh L-ATV has the latest in automotive technologies as well as the Oshkosh Core1080™ crew protection system, which is an occupant-centric, comprehensive systems engineering approach that considers every inch of the vehicle with respect to crew protection during blast events.

The L-ATV is equipped with the TAK-4i™ intelligent independent suspension system; the next-generation of Oshkosh's advanced TAK-4® independent suspension system. The TAK-4i allows the L-ATV to deliver superior ride quality at speeds 70 percent faster than today's top-performing tactical wheeled vehicles. Additionally, the TAK-4i can be raised and lowered using interior operator controls to meet sea, air and land transportability requirements. The L-ATV can be air transported internally by a C-130, C-5, C-17 or externally by CH-47 and CH-53.

Oshkosh has produced and sustained more than 150,000 tactical wheeled vehicles for the United States and its allies. Oshkosh serves armed forces around the globe by offering a full portfolio of heavy, medium, MRAP, airport rescue fire fighting (ARFF), and light vehicles. Oshkosh provides the full spectrum of vehicle life-cycle sustainment capabilities through its Global Integrated Product Support (GIPS) services.

Oshkosh has been supporting militaries in the Middle East for nearly 30 years and has a well-established

presence with program offices in the United Arab Emirates and Kingdom of Saudi Arabia. Countries throughout the region, including the United Arab Emirates, the Kingdom of Saudi Arabia, Egypt, Jordan, Iraq and Oman, rely on Oshkosh vehicles every day for tactical and logistical operations.



**Contracts**

**Rheinmetall Wins New Order for Tank Ammunition Worth Around EUR20 M**



An international customer has awarded Rheinmetall a contract to supply it with practice tank ammunition. Now official, the order is worth around €20 million.

The DM78A1 and DM78A3 subcalibre practice ammunition will be delivered in two lots between 2016 and 2018.

The 120mm x 570 DM78 round is based on an innovative acceleration and replacement technology that enables an especially economical design. In addition, the DM78 is safe to fire in all the same climatic zones as the DM63 KE service round. The DM78's very low pressure level results in negligible erosion, fostering extremely long barrel life. Moreover, the round can be used at any tank firing range that meets the safety standards required for its predecessors, the DM38 family and the DM48.

This new order underscores once again Rheinmetall's clear technological lead in the field of large-calibre weapon systems and ammunition.



**Defence Industry**

**BAE Systems Team Awarded Development Contract for U.S. Marine Corps ACV 1.1 Program**



BAE Systems was awarded a U.S. Marine Corps contract for the Engineering, Manufacturing, and Development phase of the Amphibious Combat Vehicle 1.1 program.

The U.S. Marine Corps has awarded BAE Systems'

team a contract worth \$103.7 million for the Engineering, Manufacturing, and Development (EMD) phase of the Amphibious Combat Vehicle (ACV) 1.1 program.

The company, along with teammate IVECO Defence Vehicles, will deliver a solution that will be built from the ground up to be an amphibious vehicle and will provide significant capability improvements to satisfy the Marine Corps' current and future needs.

"We are proud to continue our long history of providing the Marine Corps with superior amphibious capabilities," said Deepak Bazaz, director of new and amphibious vehicles at BAE Systems. "Our vehicle was designed to be fully amphibious with exceptional ground mobility and protection. Our ACV solution will provide the Marine Corps with a mature, cost-effective solution with significant growth capacity."

The award is one of two EMD contracts issued. During this phase, BAE Systems will produce 16 prototypes that will be tested by the Marine Corps beginning in the third quarter of 2016. Work on the vehicles will take place at BAE Systems' facilities in Quantico, Virginia; San Jose, California; and York, Pennsylvania.

BAE Systems' ACV 1.1 solution is an advanced 8x8 open ocean-capable vehicle that is based on a platform developed by IVECO Defence Vehicles. It is equipped with a new 6-cylinder, 700HP power pack, which provides a significant power increase over the current Assault Amphibious Vehicle. The vehicle performs best in class mobility in all terrains and has a suspended interior seat structure for 13 embarked Marines, blast mitigating positions for a crew of three, and improved survivability and force protection over currently fielded systems. The team has conducted extensive risk mitigation testing and evaluation for swim, land mobility, and survivability capabilities that have proven the solution's capabilities.

BAE Systems has more than 70 years of experience designing and building amphibious vehicles and is a leading provider of combat vehicles, having produced more than 100,000 systems for customers worldwide. IVECO Defence Vehicles brings additional proven experience, having designed and built more than 30,000 multi-purpose, protected, and armored military vehicles in service today.



**Defence Industry**

**AT Communication is pleased to announce the AT GNSS-01 Multi System GPS Receiver**

AT Communication is pleased to announce the AT GNSS-01 Multi System GPS Receiver. The AT-GNSS-01 has a significant advantage over single system receivers including:

- Higher position accuracy
- Faster cold start position acquisition times
- More robust against interference



- Improved acquisition success in harsh signal environments



- Higher immunity to jamming and spoofing
- Intelligent EW detection and removal
- RF filtering for adjacent radio transmitters

Applications of the AT GNSS-01 include; situational awareness, vehicle and asset tracking systems, surveying, mapping & GIS and time synchronisation.



For full details of the system, please visit this link:  
<http://hf-ssb-transceiver.at-communication.com/en/at/gnss-gps-receiver.html>

