

# Army Guide monthly



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## Army

## Guns Up For Australian Army 6x6 G-Wagons



The Australian Army will soon take delivery of the first Mercedes-Benz G-Wagon 6x6 surveillance reconnaissance vehicles (SRV) fitted with a new customised weapons suite.

Under Phase 3A of Project Land 121, around 200 G-Wagon 6x6 SRVs will each receive front and rear weapon mounts developed by Australian weapon mount specialist W&E Platt.

In a AUD\$2.5 million contract with Australia's Defence Materiel Organisation (DMO), the company is currently building the mounts at a rate of about 10 sets per week. The contract also includes a spare parts package and technical documentation.

In collaboration with the DMO, Platt undertook extensive in-house design and engineering evaluations of the bespoke weapon mount solutions throughout much of 2012, including Commonwealth of Australia sponsored live fire trials of advanced prototype mounts.

Designed specifically for the unarmoured 300 CDI G-Wagon 6x6 SRV platform, the weapon mount fit comprises a front rail mount for both left and right-handed gunners that is installed on the upper dash structure for the vehicle commander; and a rear skate mount fixed to the rear stowage compartment. The latter enables the gunner to engage targets left, right and to the rear of the vehicle but not to the front of the vehicle, where arcs of fire are restricted by rotation stops.

Each weapon mount can accept a Minimi 5.56mm light machine weapon or a MAG-58 7.62mm general purpose machine gun.

Australian Army units earmarked to receive the 6500kg gross vehicle mass G-Wagon 6x6 SRV include the three Regional Force Surveillance Units: the Pilbara Regiment, NORFORCE and the 51st Battalion, Far North Queensland Regiment. It is understood that Royal Australian Air Force Airfield Defence Guards units will also receive the vehicle.

Delivery of the Platt weapon mounts will continue through the first quarter of 2014.



## Robots

## Northrop Grumman's CaMEL to Participate in Robotics Demonstration and Armed Live Fire

FORT BENNING, Ga. -- Northrop Grumman Corporation has been selected to demonstrate its

Carry-all Modular Equipment Landrover, called CaMEL, during the U.S. Army Maneuver Center of Excellence Robotics Limited Demonstration Oct. 7-10 at Fort Benning, Ga.



Northrop Grumman's CaMEL will participate in both parts of the center's 'robot rodeo.' A 'lighten-the-load' CaMEL configuration will traverse the Squad-Multipurpose Equipment Transport, or S-MET, course Oct. 7. On Oct. 10, the company's Mobile Armed Dismount Support System, an armed robotic CaMEL platform, will participate in wireless live firing of an armed unmanned ground vehicle.

CaMEL is a mid-sized unmanned ground vehicle (UGV) designed to accommodate multiple missions, including lightening the load; performing casualty evacuations; clearing antipersonnel mine routes; and hauling ammunition for dismounted mortar platoons. It also can serve as a mobile communications platform, towed artillery ammunition carrier, network retransmission platform and robotic weapon system and can be used in resupplying ammunition, barrier materials for obstacles and food and water.

On the S-MET range, CaMEL and other robotic systems will be put through their paces to assist the Army in developing requirements in categories including operational range, speed, load-bearing capacity, navigation options (tethered, wireless and autonomous), mobility and maneuverability in various terrain, obstacle detection and avoidance and energy efficiency. CaMEL will be converted to the mobile armed dismount support system configuration for the live fire.

"CaMEL is a multifunction platform that can quickly transform from supporting troops to protecting troops as an armed wingman, increasing the firepower of dismounted platoon and company maneuver units," said Phil Coker, director of the Integrated Platform Solutions business at Northrop Grumman's Information Systems sector. "Its hybrid engine allows the armed CaMEL to operate very quietly – a real plus on the battlefield – and travel farther to provide firepower where it's needed."

The 'armed wingman' CaMEL in its Mobile Armed Dismount Support System configuration can carry a variety of crew-served weapons, including the MK-19 40mm automatic grenade launcher, M2 heavy machine gun, M240/249 machine gun and 25 and 30mm weapon systems. It also can carry a load of 1,000 lbs. of

equipment at a maximum speed of 5 miles per hour across rough terrain.

CaMEL's hybrid design – diesel engine combined with a battery – not only provides more than 20 hours of continuous operations on 3.5 gallons of fuel but also produces power that can be exported and used for charging batteries or powering other systems.

"Power is one of the biggest challenges on the battlefield. CaMEL is an innovative solution that reaches out and touches power in a new way – it's a robotic transport and weapons platform that actually generates, not just uses, power," Coker said.

The annual Maneuver Center's Robotics Limited Demonstration gives industry the opportunity to showcase new and innovative UGVs and interact with the Army user, research and development, and capability-development communities.

Northrop Grumman is a leading global security company providing innovative systems, products and solutions in unmanned systems, cyber, C4ISR, and logistics and modernization to government and commercial customers worldwide. Please visit [www.northropgrumman.com](http://www.northropgrumman.com) for more information.

### Defence Industry

## KONGSBERG strengthens the relationship with Canadian Government

The Canadian Department of National Defence and KONGSBERG have signed a contract for repair and overhaul of PROTECTOR M151 Remote Weapon Stations.

Since 2005, the company has been supplying the PROTECTOR M151 Remote Weapon Stations (RWS) to the Canadian Forces where the system has been integrated on the RG-31 platform. The stations have been in continuous service, and have provided superior protection for soldiers serving in both Iraq and Afghanistan.

"KONGSBERG is very pleased to see DND's commitment to the Canadian Remote Weapon Stations. These systems have been operating for several years in quite extreme conditions and need to be refurbished. The ability to do this, is proof of the PROTECTOR RWS modular concept, which enables affordable upgrades to a state-of-the-art technological standard. The refurbished RWS's will give the Canadian armed forces enhanced protection for years to come and continues KONGSBERG's position as a prime supplier of PROTECTOR RWS" said Mr. Rune Johannessen, Vice President of Business Development, the Americas.

"This program is a milestone for KPS Canada," said KPS Canada's President Jiřn Buř. "This is the first direct contract with DND, and we believe that this contract will help create conditions for further growth locally. KONGSBERG is already an established and reliable supplier in the region, the province and in Canada."

PROTECTOR RWS is designed to be operated by

gunners who remain inside the armoured vehicle reducing their exposure to enemy fire. The additional safety and protection the vehicle provides allows for soldiers to operate more effectively. The PROTECTOR M151 RWS will be refurbished and set to the same standard as the Dual Remote Weapons Station that Kongsberg Protech Systems is producing for Department of National Defence (DND) as part of the Tactical Armoured Patrol Vehicle (TAPV) program. DND will benefit from the commonality in terms of training, logistics, and common components.

### Defence Industry

## LM to Build JLTV at Award-Winning Facility in Camden, Arkansas



Lockheed Martin will move production of its Joint Light Tactical Vehicle (JLTV) to an assembly line at the company's award-winning Camden, Ark., manufacturing complex, where the company expects to gain significant production efficiencies and cost reductions.

"Lockheed Martin is implementing a low-risk production plan that will take advantage of the proven, outstanding Camden manufacturing operation and help make our JLTV more affordable for the U.S. Army and Marine Corps," said Scott Greene, vice president of Ground Vehicles for Lockheed Martin Missiles and Fire Control.

JLTV prototypes were produced at BAE Systems' Sealy, Texas, manufacturing facility for the program's Technology Development and Engineering and Manufacturing Development phases. Plans to close the Sealy plant were announced today. BAE Systems will remain a key partner on the Lockheed Martin JLTV team, providing integrated cabs, protection solutions and other vehicle manufacturing expertise.

"BAE Systems remains committed to Lockheed Martin and our JLTV program," said Mark Signorelli, vice president and general manager of Combat Vehicles for BAE Systems. "Recognizing the budget pressures our customers face, the team is reshaping our efforts to provide the most cost competitive offering with exceptional technical capability and product quality to our end users."

Lockheed Martin's Camden complex is among the premiere manufacturing sites in the United States. Camden has a strong reputation for on-schedule delivery

of high quality products including High Mobility Artillery Rocket System (HIMARS) launchers, Guided Multiple Launch Rocket System (GMLRS) rockets, Patriot Advanced Capability-3 (PAC-3) Missiles and Terminal High Altitude Area Defense (THAAD) ground vehicles. Over the last decade Camden has won more than 60 awards for quality, safety, security and community service, including:

- The Malcolm Baldrige National Quality Award, 2012
- The Shingo Silver Medallion Award for Operation Excellence, 2008, 2009
- Industry Week magazine's "Best Plants in North America," 2005, 2006
- The National Safety Council's Perfect Record Award, 2007
- The National Safety Council's Occupational Excellence Achievement Award, 2006, 2007, 2009, 2010
- The National Safety Council's Industry Leader Award, 2007
- The Arkansas Governor's Quality Award, 2012

Designed as a more capable and survivable replacement for many of the current Army and Marine Corps HMMWV "Humvee" vehicles, the Lockheed Martin JLTV is systems-engineered to return crucial protection, mobility and transportability to Soldiers and Marines. Its advantages include greatly improved crew protection and mobility, lower logistical support costs, superior fuel efficiency, exportable power-generation with substantial margin for future growth, and state-of-the-art connectivity with other platforms and systems.

For more than three decades, Lockheed Martin has applied its systems-integration expertise to a wide range of successful ground vehicles for U.S. and allied forces worldwide. The company's products include the combat-proven MLRS M270-series and HIMARS mobile launchers, Havoc 8x8, Common Vehicle, Light Armored Vehicle-Command and Control, Warrior Capability Sustainment Programme, Joint Light Tactical Vehicle and pioneering unmanned platforms such as the Squad Mission Support System (SMSS).

Lockheed Martin Missiles and Fire Control is a 2012 recipient of the U.S. Department of Commerce's Malcolm Baldrige National Quality Award for performance excellence. The Malcolm Baldrige Award represents the highest honor that can be awarded to American companies for their achievements in leadership, strategic planning, customer relations, measurement, analysis, workforce excellence, operations and results.

## Robots

### ROBOTEAM Unveils New Configuration of its Micro Tactical Ground Robot (MTGR) Designed for Harsh Field Conditions

ROBOTEAM will unveil its new configuration of the

Micro Tactical Ground Robot - MTGR - designed for harsh field conditions, at AUSA 2013.



The new configuration of the MTGR was specially developed for harsh field conditions. Designed for intelligence gathering (ISR), EOD missions, and public safety day-to-day activities, the robust MTGR is a 16-lb unmanned ground vehicle that is highly maneuverable and is the lightest available on the market in its category. Carried by an individual soldier, the MTGR climbs stairs, operates in rough terrain, transmits 360° video in real time, uses a US Military standard battery, and has a secured MANET Data Link.

According to Yosi Wolf, Co-CEO of ROBOTEAM, "We continuously invest resources in order to create the best possible and highest quality solutions in the field, while maintaining a reasonable level of affordability. Our robotic solutions, which are combined with the most advanced command and control systems, are preferred by our customers."

## Army

### Engility Awarded \$9.7 M to Support R&D for the US Army's Vehicle Fleet

Engility Holdings, Inc., today announced that it has been selected as the prime contractor for a \$9.7 million award to provide engineering support to research and development across the U.S. Army's fleet of vehicles. Engility will provide this work in support of the Army Research Laboratory (ARL) Vehicle Technology Directorate (VTD), Aberdeen Proving Ground, Md.

"We are extremely pleased to win this new business, which reflects our competitive value and strong past performance while supporting the missions of the U.S. Army," said Engility President and CEO Tony Smeraglinolo.

Engility will provide research and experimental technical engineering in platform mechanics, propulsion technologies, vehicle analysis engineering services and autonomous systems, under this contract, which is a three year, cost plus fixed fee, single award indefinite-delivery/indefinite-quantity vehicle. Engility engineers will support the Army on projects that could range from improving mileage and increasing the speed of a specific vehicle to designing or configuring new technology and equipment that will affect performance.

The contract was awarded by Army Contracting Command, Aberdeen Proving Ground (APG) Adelphi Contracting Division in support of ARLVTD.

**Exhibitions**

**Oshkosh Defense C4 and Systems Integration Experts Link Wheeled Vehicles Into the Network for Ground Missions**



OSHKOSH, Wis. -- One of the U.S. Army's top priorities is ensuring the right information is available in any environment down to the lowest tactical level on the battlefield. Oshkosh Defense, a division of Oshkosh Corporation, is demonstrating its C4 and systems integration capabilities to connect soldiers to the network on its MRAP All-Terrain Vehicle (M-ATV) this week at the Association of the U.S. Army (AUSA) 2013 Annual Meeting and Exposition in Washington, D.C.

Unlike a third-party aftermarket integration approach, which requires vehicle disassembly and a trial-and-error design approach, Oshkosh Defense integrates C4 equipment and a full range of weapons and other systems in the initial vehicle design process to reduce potential system conflicts or interference. Complete assembly line installation and quality control processes also eliminate the cost and quality issues related to tearing apart and reassembling the vehicle to run wiring harnesses and connectors.

“Oshkosh’s ‘first pass’ systems integration approach optimizes the overall vehicle and C4 package design to deliver a fully integrated solution that puts the network at the soldiers’ fingertips to support their missions,” said John Urias, executive vice president of Oshkosh Corporation and president of Oshkosh Defense. “This integrated approach, which we utilized for our JLTV EMD vehicles, offers greater value for our military customer, a more ergonomic design for the soldier and enables rapid fielding of vehicles with integrated C4ISR suites.”

For its Joint Light Tactical Vehicle (JLTV) solution, Oshkosh Defense developed multiple JLTV mission package configurations. The 22 JLTV prototypes that Oshkosh delivered to the government in August for the Engineering and Manufacturing Development (EMD) phase were fully integrated and tested by Oshkosh.

Responding to an urgent need in Afghanistan for the MRAP All-Terrain Vehicle (M-ATV) in 2009, Oshkosh Defense delivered its M-ATVs pre-wired and ready for C4 equipment. This contributed to the life-saving vehicles being designed, produced and delivered at a rate of more than 1,000 per month, all in less than one year’s time.

Oshkosh Defense has a dedicated team of C4 and integration specialists who are knowledgeable of the

entire range of vehicle systems and requirements. The company considers the impact of the systems and other equipment in the vehicle’s 3D modeling and design process, and systems are designed for future growth, enabling vehicles to accept expanded or updated C4 systems without intrusive effects on the vehicle itself. Oshkosh Defense also can install the C4 and other systems in-house, eliminating the need for a third-party integrator.

A fully integrated Oshkosh M-ATV will be on display at the Oshkosh Defense AUSA booth #6943. Oshkosh Defense representatives also will be on hand to discuss the company’s advanced integration capabilities.



**Exhibitions**

**Oshkosh Defense Displays Its JLTV Solution for the U.S. Army at AUSA 2013**



OSHKOSH, Wis. -- As the U.S. Army advances the Joint Light Tactical Vehicle (JLTV) program to fill a critical capabilities gap for ground operations, Oshkosh Defense, a division of Oshkosh Corporation, has presented a JLTV solution with unprecedented protected mobility.

The Oshkosh JLTV solution, the Light Combat Tactical All-Terrain Vehicle (L-ATV), leverages unmatched depth of experience designing, integrating and sustaining vehicles for missions outside the wire.

Oshkosh is displaying its JLTV solution this week at the Association of the U.S. Army (AUSA) 2013 Annual Meeting and Exposition in Washington, D.C.

“The Oshkosh L-ATV redefines the future of light tactical vehicles – merging key design aspects of highly survivable combat vehicles and off-road tactical vehicles to operate in a wide range of threat levels and terrains,” said John Bryant, senior vice president of Defense Programs for Oshkosh Defense. “In fact, independent testing proves that the Oshkosh L-ATV provides the same ride quality at speeds 70 percent faster than today’s industry gold standard for off-road mobility, the Oshkosh MRAP All-Terrain Vehicle (M-ATV).”

Oshkosh delivered 22 JLTV prototypes to the government in August for the Engineering and Manufacturing Development (EMD) phase. The Oshkosh JLTVs were produced following Oshkosh's standard development process, whereby initial variants were prototyped and remaining trucks were produced on a warm production line.

Oshkosh’s manufacturing facilities operate on lean principles with a mature, disciplined quality management system tailored for military vehicles and systems

integration. The Oshkosh JLTV prototypes are undergoing 14 months of robust military testing, and Oshkosh will provide vehicle training and support throughout the testing.

“From design concept to manufacturing, the Oshkosh JLTV solution was developed with soldiers’ needs in mind,” Bryant said. “Since day one, we’ve managed cost as a key technical parameter to optimize the total life-cycle cost of our JLTV.”

Using the Oshkosh TAK-4i™ intelligent independent suspension system, the Oshkosh JLTV solution delivers unprecedented levels of off-road mobility for a light vehicle. The vehicle achieves a 25 percent improvement in independent wheel travel over the most mobile vehicles currently fielded, allowing for faster speeds and new levels of ride quality in off-road environments. The TAK-4i system expands on the success of the Oshkosh TAK-4 system, which has been used on more than 20,000 military vehicles and given Warfighters greater mobility in rugged landscapes like those found in Afghanistan.

Leveraging its experience with armored vehicle platforms like the Oshkosh M-ATV, Oshkosh designed the L-ATV’s crew protection system to be scalable and accept multiple armor configurations to protect soldiers from continually evolving battlefield threats.

The Oshkosh JLTV solution is on display at the Oshkosh Defense AUSA booth #6943. Oshkosh Defense representatives also are on hand to discuss JLTV and other programs.

- ANR support for headsets
- Digital speech processing
- High intelligibility & reliability of communications
- Wireless extension for dismounted application
- Automatic retransmission of communications between CNRs
- Data capability, TCP/IP
- Possibility to Interface with other Battlefield systems
- Management System for configuring stations and functionality (BMS)
- Built-In-Test
- Software defined features to allow reconfiguration of the systems depending on application requirements

The AT VICM Software Defined Intercom System is the product of substantial experience in the manufacture of communication systems internationally and feedback from our clients using our field proven systems.

For more detail on the AT VICM Software Defined Intercom System please follow the link <http://military-intercom-systems.at-communication.com/en/>

## Defence Industry

### Textron M&LS Introduces COMMANDO Select 90mm Direct Fire Armored Vehicle



Textron Marine & Land Systems (TM&LS), an operating unit of Textron Systems, a Textron Inc. company, today introduced the latest vehicle in its COMMANDO™ four-wheeled armored vehicle line-up during the AUSA Annual Meeting and Exposition (AUSA 2013) in Washington. The new COMMANDO Select 90mm Direct Fire vehicle is being shown at Booth 825 during AUSA 2013.

Like the COMMANDO Select Mortar Indirect Fire vehicle introduced earlier this year, the 90mm Direct Fire vehicle meets growing international demand for significantly greater under-armor firepower integrated on a highly-mobile armored vehicle.

The new 90mm Direct Fire vehicle is equipped with a CMI Defence Cockerill CSE 90LP weapon system, which offers day/night combat capability for tactical options ranging from counter-insurgency to conventional combat operations. The two-person, low-profile turret is lightweight and simple to operate and maintain, and is outfitted with a Cockerill Mk3 90mm low pressure gun. More than 2,300 guns in the Mk3 family are in service on vehicles across the globe and have proven themselves

## Defence Industry

### AT VICM Software Defined Intercom System

AT Communication is pleased to announce the launch of the AT VICM Software Defined Intercom System. The AT VICM is a fully featured and reliable solution for communication within and for dismounted use in military, police and light strike armoured vehicles. Complementing the system are Personal Combat Headsets that provides comfortable and effective hearing protection in noisy environment inside military vehicles.

The heart of the system is the central communication unit (CCU) which is available in two variants: AT VICM 201 and AT VICM 201A dependent on the maximum number of the crew members and combat radios per vehicle. The AT VICM 201 is recommended for small platforms (tanks, light and strike vehicles) and the AT VICM 201A is recommended for larger platforms (APCs and command centres). Other system units for connectivity to radios, alarms and personal intercom stations are connected to central communication unit in a star type network.

Key features of the AT VICM Software Defined Intercom System are:

- Support for up to 21 crew members
- Interface and control up to 6 combat Net Radios (CNRs)
- Simple to use operation and installation

to be a reliable and accurate weapon.

"Our new vehicles are a direct response to multiple international customers seeking additional firepower in highly-protected, mobile and sustainable armored vehicles," explained Tom Walmsley, TM&LS senior vice president and general manager. "The 90mm Direct Fire vehicle uses our combat-proven COMMANDO Select platform and adds a trusted CMI Defence turret to deliver an effective package for a wide range of military and security applications."

During the past two years more than 550 COMMANDO Select vehicles, in three variants, have been delivered for use by the Afghan National Army's Mobile Strike Force units.

Overall, more than 8,000 TM&LS COMMANDO armored vehicles are in the inventories of nations including Afghanistan, Colombia, Iraq, Malaysia, Saudi Arabia, Taiwan, Thailand and the United States. An additional 600 vehicles are in various phases of production and delivery to militaries in Canada, Colombia and Afghanistan.

Rigorously tested and proven in the toughest environments, TM&LS' COMMANDO family of armored vehicles utilize a V-Hull with all systems protected under armor to deliver superior mine-blast protection while also providing unmatched on-road/off-road mobility. These vehicles are easy to maintain and operate, with readily available parts, training and service support. TM&LS offers four lines of COMMANDO four-wheeled vehicles - COMMANDO Elite, COMMANDO Select, COMMANDO Advanced and COMMANDO Utility.

