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Defence Industry

THOR produces two models of the premier.408 ultra long range sniper system

THOR Global Defense Group, headed by Larry Knesek of the Knesek Group continues to lead the way with innovative products with specific tactical applications for target interdiction. THOR produces two models of the premier.408 ultra long range sniper system, the XM408, and M408 (XM408ASA).

The latter of which features a variety of options suited for improved accuracy, rigidity and superior firepower needed for military and law enforcement application of both hard and soft target engagement. Benefits of the M408 rifle include both Accuracy Improvement – Due to harmonics and a more stable shooting platform as well as an accurized assembly, the accuracy of the XM408 is greatly enhanced with its High Quality KRIEGER barrel as well as Recoil Reduction – The ASA model substantially reduces recoil, allowing for quicker follow up shots among other system enhancements.

Defence Industry

UK Scout SV turret undergoes live firing tests five months ahead of schedule

Less than 11 months after the UK Scout / Specialist Vehicle (SV) Demonstration Phase contract was signed, the Industry Team led by General Dynamics UK has demonstrated impressive progress on the programme. The Team has conducted live-fire tests of the new Cased Telescoped (CT40) cannon system integrated in the very first Scout SV Turret, five months ahead of schedule.

This key maturity milestone was achieved with the firing of the integrated CT40 main weapon system on Wednesday 18th May at the Rheinmetal Landsysteme facility in Gersthofen, Germany as part of the SV programme for which General Dynamics UK is the overall Prime contractor and Lockheed Martin UK is the Turret system Design Authority.

The live firing was attended by Roddy Malone, Scout SV Team Leader at MoD, Steve Rowbotham, Vice President of General Dynamics UK, and representatives from CTA International, Rheinmetal Landsysteme, Curtiss Wright, Lockheed Martin UK and General Dynamics UK. The Turret system will now be delivered to Lockheed Martin UK in June 2011 for further system integration and testing at Ampthill, Bedfordshire.

Roddy Malone said "This was a very impressive event so soon after contract award. It is of value not only to the UK MoD but also to the French Government as the CTAI Cannon is being jointly qualified for both nations. The efforts of all involved have been magnificent."

Brigadier Mike Riddell-Webster, Head of Capability for Ground Manoeuvre welcomed the news, commenting, "The Army is very pleased to note such progress on one of its highest priority equipment programmes."

"The successful live-firing of the fully integrated CT40 cannon system into the first Scout SV Turret is yet another example of the SV Demonstration phase moving forward at pace," said Steve Rowbotham. "SV will not only deliver innovation to the British Army in Scout and its other variants, it will also deliver the best protection, technology and fightability ever seen in a vehicle of this type."

"The Scout SV Turret Structure is a key programme for Rheinmetall Landsysteme" said Andreas Riedel, Head of the Rheinmetall Landsysteme Infantry and Artillery Business. "The achievement of the first firing from a new turret so soon after the award of the contract is the result of excellent co-operation from all of the companies involved."

The Scout reconnaissance vehicle will be a key variant in the British Army's operational SV fleet when it goes into service. It will serve alongside other SV variants including Protected Mobility, Repair and Recovery vehicles, all designed upon on the common-base platform being developed by General Dynamics UK.

The innovation of a 1.7 meter turret ring means that the Scout turret is designed to maximise space for the soldiers inside, thereby optimising fightability. This gives soldiers considerable room for modern display screens, comfort for long periods inside the turret and ease of movement, even wearing full body armour. With the need for military electronics ever-expanding on operations, the open electronic architecture allows significant growth for upgrade.

British troops using the Scout SV will have the best protection available in this vehicle class, both as it is delivered and as it grows to meet future threats. The vehicle will be immediately capable of delivering load-carrying growth potential of up to 42 tonnes thanks to a modern, proven drivetrain. This means that SV is capable of being equipped to meet future threats likely to appear over its entire 30 year life, without the need to upgrade its engine or transmission during that time.

Rheinmetall Landsysteme designs, develops and manufactures the Scout SV Turret Structure for Lockheed Martin UK at the company's facility in Gersthofen, Germany, which is a centre of excellence for turret systems. After manufacture and provision of three

turrets under the current Demonstration phase contract, Lockheed Martin UK will deliver these to General Dynamics UK for Integration and Test onto the base vehicle for Scout. Subject to further MoD approvals, Lockheed Martin UK is expected to conduct assembly, integration and test of the production turrets at the Defence Support Group (DSG) facility at Donnington in the East Midlands. The manufacture contract for the Scout turret is likely to create approximately 500 jobs for Lockheed Martin and its supply chain partners in the UK, with the overall SV supply chain sustaining up to 10,000 jobs across UK.

Defence Industry

Textron Marine & Land Systems to Build Armored Vehicles for Afghanistan National Army

NEW ORLEANS -- Textron Marine & Land Systems, an operating unit of Textron Systems, a Textron Inc. company, today announced it has been awarded an Undefinitized Contract Action (UCA) by the U.S. Army Contracting Command, Warren, Mich., to produce up to 440 Medium Armored Security Vehicles (MASV) for the Afghanistan National Army (ANA).

MASVs include nine armored vehicle configurations designed specifically for ANA roles and missions, and are derived from the combat-proven M1117 Armored Security Vehicle (ASV) and ASV Armored Personnel Carrier (APC). In addition to ASV and APC configurations, other mission variants include: command and control, ambulance, engineering, maintenance, mortar, and reconnaissance vehicles.

The vehicles will be contracted through the U.S. Army Foreign Military Sales (FMS) process; however, this effort is being funded through Afghan Security Forces Funds (ASFF).

The one-year baseline contract, with a potential value of $257 million, authorizes initial funding of $125.9 million to begin work leading to the planned delivery of 240 MASVs and associated support equipment, spare parts, field service representatives, training and training aids. Vehicle production will be performed at Textron Marine & Land Systems' facilities in the New Orleans area, with an estimated completion date of June 2012.

The contract includes options to produce up to an additional 200 vehicles, plus two option years for training and logistics support, with a potential value of $286 million. While these additional vehicles, if ordered, would have an estimated completion date of December 2012, training and logistics support would continue through the first quarter of 2014.

"The ASV continues to play a key role in the U.S. Army combat vehicle fleet around the world with its outstanding readiness rate and versatile mission roles," said Lt. Col. Mark Morano, product manager, Armored Security Vehicle, U. S. Army Program Executive Office, Combat Support and Combat Service Support. "The protection levels and extreme mobility offer the warfighter and commander a great degree of confidence in safety and mission success."

All ANA vehicles will be configured with Enhanced Survivability (ES) capability, which improves blast protection to mine-resistant, ambush-protected (MRAP) levels. The new ES-equipped vehicles will continue to possess the M1117 ASV's original, all-important V-shaped hull design, in addition to innovative protection design features that enable it to meet MRAP blast protection standards.

Reliability and supportability also are reinforced by a Total Package Fielding concept, which includes technical manuals, spares, and comprehensive operator and maintenance training.

"MASVs, and the extensive logistics support package provided with these vehicles, will serve our Afghanistan allies well in efforts to establish peace and security in their country," said Textron Marine & Land Systems Senior Vice President and General Manager Tom Walmsley.

Textron Marine & Land Systems has delivered more than 3,100 M1117 ASV and related configurations to the U.S. Army, as well as military and police forces in Iraq, Colombia and Bulgaria. These vehicles have consistently achieved exceptional operational readiness and combat availability rates greater than 90 percent over the life of the U.S. Army program. Through May of this year, Textron Marine & Land Systems also has achieved 68 consecutive months of on-time ASV deliveries to the U.S. Army.

Current ASV missions within the U.S. Army include Military Police operations in support of convoy protection, checkpoint security, perimeter security and reconnaissance, as well as Field Artillery Combat Observation and Lasing Teams (COLT) with the M1200 Armored Knight configuration.

Robots

Irobot Receives $14.1 M Order from US Navy

Bedford, Mass. -- iRobot Corp., a leader in delivering robotic technology-based solutions, has received a $14.1 million order from the Naval Sea Systems Command (NAVSEA).

This first order under a recently announced $230 million indefinite delivery/indefinite quantity (IDIQ) contract calls for delivery of 86 Man Transportable Robotic System (MTRS) MK 1 Mod 1 robots, spare parts

and accessories. MTRS MK 1 Mod 1 is modeled after the iRobot 510 PackBot. The company expects to complete delivery of these robots by the end of the second quarter.

"iRobot has seen consistent growth in the use of unmanned ground vehicles since PackBot was first deployed on the battlefield almost 10 years ago," said Robert Moses, president of iRobot's Government and Industrial Robots division. "PackBot continues to keep our troops safer on the battlefield, and we are pleased that the Navy will be providing more of these robots to our troops."

iRobot's combat-proven unmanned ground vehicles protect those in harm's way. More than 4,000 have been delivered to military and civil defense forces worldwide, successfully performing search, reconnaissance, bomb disposal and other dangerous missions.

Defence Industry

BAE Systems Inc.`s FNSS Joint Venture Receives $559 Million Award from DEFTECH to Provide AV-8 Vehicles for the Malaysian Armed Forces

ARLINGTON, Virginia -- FNSS of Turkey, a joint venture between BAE Systems, Inc. and Nurol Holding of Turkey, has received and signed a $559 million letter of offer and acceptance (LOA) from DEFTECH of Malaysia for the design, development and manufacture of 257 DEFTECH AV-8 8x8 wheeled armored vehicles and Integrated Logistics Support for the Malaysian Armed Forces.

The vehicle, to be manufactured by DEFTECH in Malaysia, is based on the FNSS-designed PARS 8x8 multi-purpose, multi-mission, wheeled armored vehicle. The vehicle will be redesigned by FNSS and DEFTECH engineers specifically to meet the requirements of the Malaysian customer.

“This effort will not only benefit the Malaysian Army, but will also further develop the indigenous capability in Malaysia,” said John Kelly, vice president of exports and international business for BAE Systems’ Land & Armaments sector. “BAE Systems, Inc. actively looks to support FNSS in its ambition to market its land vehicle expertise globally.”

Malaysia’s AV-8 8x8 armoured wheeled vehicle program involves the local design, development and manufacture of the vehicle, as well as the integrated logistic support. FNSS will provide the technical assistance and technology transfer to enable DEFTECH to produce the vehicles in Malaysia. The AV-8 will be Malaysia’s first indigenous 8x8 armored wheeled vehicle family consisting of 12 variants, for use by the Malaysian Army.

“This project builds on the already successful industrial partnership with DEFTECH, our long term industrial partner in Malaysia. We look forward to supporting DEFTECH on this challenging program and making it another success story in Malaysia,” said Nail Kurt, General Manager and CEO of FNSS. “FNSS is committed to providing the means for DEFTECH to realize the goal of developing an 8x8 Wheeled Armored Vehicle Family (AV8) to meet the Malaysia Armed Forces requirements. The project is based on putting in place the infrastructure to design, develop, produce and maintain a family of 8x8 Wheeled Armored Vehicles.”

FNSS and DEFTECH previously delivered 211 ADNAN Armored Combat Vehicles (ACV) and 8 120mm ACV Mortar Carriers to the Malaysian Army and are now about to complete the deliveries of 48 additional ADNAN ACVs under a separate contract.

Contracts

CROWS contract valued at MNOK 552

KONGSBERG has booked an order valued at NOK 552 millions from the US Army. The order is part of the increase of the Common Remotely Operated Weapon Stations (CROWS) framework agreement for up to 11.690 systems signed in February 2011.

CROWS is a joint acquisition program for weapon stations for the US Army`s vehicle programs. A common solution will result in substantial efficiency gains in respect of protection, training, support and further development.

The Protector Weapon Control System protects military troops by allowing the vehicle's weapons to be operated from a protected position inside the vehicle.

Contracts

Otokar Awarded $63.2 M Contract for ARMA 6x6

Turkey -- Turkish leading and largest privately owned tactical vehicles manufacturer Otokar has been awarded a $63.2 million contract for its new 6x6 tactical armoured vehicle ARMA. Deliveries are scheduled to be in 2012 and Otokar will provide spare parts and training under the contract requirements.

"This award is the second export contract for ARMA 6x6 in its first year" says Serdar Gorguc, Otokar's General Manager. "As the leading designer and exporter of armoured vehicles in Turkey, we continue to grow in defence industry with local and international orders. Representing the Turkish defence industry in world arena with our well-known armoured vehicles, we continue to execute contracts abroad. We are proud to sign the second contract although it has only been twelve months since we introduced the ARMA. This award demonstrates that ARMA is the new generation answer and ideal concept and design for upcoming threats, and expectations of modern armed forces. This second contract which is signed quite soon after the presentation of the vehicle to users is a strong indicator that ARMA will be one of the flagships of Otokar's product range."

ARMA is the newest product family within the Otokar's the tactical wheeled armoured vehicle range with modular multi-wheel configuration. ARMA provides superior tactical and technical features with an outstanding cost among competitive products. Thanks to the high level of ballistic and mine protection as well as, the outstanding design allowing the integration of various types of mission equipments, ARMA is an adaptable platform for evolving mission needs in a modern battlefield.

About ARMA 6x6

The 6.4 m long, 2.7 m wide and 2.2 m high ARMA 6x6 variant has an 19 tonnes combat weight and carries a driver, commander and eight dismounts in its fully NBC protected hull. The vehicle is C-130 air transportable in standard configuration.

ARMA's front two axles are steerable enabling it to make a turning radius of 7.85 m and the vehicle rides on independent hydro-pneumatic suspension, offering respectable off-road mobility. Tyre run flat capability and Central inflation system is supplied as standard. It can negotiate a 45-degree approach and departure angles leading onto 60 per cent inclines and 30 per cent side-slopes. It can also cross 1.2 m wide trenches and climb over 60 cm obstacles.

A 450 hp water-cooled turbo diesel capable of running on F-34 or F-54 fuel drives the wheels through an automatic gearbox and single-speed transfer box, giving it a top speed of 105 km/h and a power/weight ratio of 24.3 hp/tonne.

This also powers the onboard 24 V DC electrical system, which incorporates two maintenance-free 125 Ah batteries and a 3.3 kW converter.

The engine is located at the right front of the vehicle, allowing a comparably high internal volume to be efficiently and ergonomically used. With this internal layout, all the personnel especially the commander can keep eye contact continuously among each other.

ARMA 6x6 can be driven in 6x6 or 6x4 modes depending upon the terrain conditions. The vehicle is amphibious and driven by 2 hydraulically driven propellors in water allowing a high seagoing performance with a pivot turn capability. ARMA's ballistic and anti-mine protection is provided by high hardness monocoque steel hull and all personnel is seated on anti- mine seats.

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Defence Industry

Oshkosh Defense to Supply New and Recapitalized Heavy Tactical Vehicles for U.S. Army

OSHKOSH, Wis. -- Oshkosh Defense, a division of Oshkosh Corporation, will deliver more than 730 trucks from the U.S. Army's Family of Heavy Tactical Vehicles (FHTV), including new and recapitalized Heavy Expanded Mobility Tactical Truck (HEMTT) A4s and new Heavy Equipment Transporter (HET) A1s, following orders from TACOM Life Cycle Management Command (LCMC).

Oshkosh recently reached a major milestone with more than 10,000 heavy and medium-payload vehicles restored to zero-hours, zero-miles condition for the U.S. Army, National Guard and Marine Corps. Oshkosh recapitalizes and remanufactures vehicles for the U.S. military as part of the company's extensive life-cycle support and aftermarket services program. Through recapitalization, heavily used vehicles are stripped to their frame rails and rebuilt to like-new condition.

"The restoration of more than 10,000 military-class vehicles is a significant achievement in our continuing support of the military's fleet management strategy," said Mike Ivy, vice president and general manager of Army Programs for Oshkosh Defense. "Oshkosh Defense has recapitalized and retrofit vehicles for more than 40 years, significantly increasing their life-span and offering great value to military customers, and equipping soldiers with the latest vehicle safety, survivability, and mobility technologies."

To meet the latest HEMTT A4 configuration, the suspension in the recapitalized vehicle is improved and a fully air-conditioned and armor-ready cab is installed, in addition to a more powerful drivetrain. The vehicles have new components, new technology and a new "zero hours/zero miles" bumper-to-bumper warranty, at a considerable cost savings to the government. Oshkosh also has refurbished more than 2,000 heavy-payload vehicles in theater, including vehicles originally built by other manufacturers, as part of the Army's Theater Provided Equipment Refurbishment (TPER) program.

The HEMTT A4 is the backbone of the Army's logistics and resupply fleet, and is available in multiple variants for a wide range of operations. The Light Equipment Transporter (LET) variant is included in the orders and is equipped with durable components to provide optimal maneuverability and versatility in rugged terrain. Its anti-lock braking system, traction and air-ride suspension allow troops to navigate wherever the mission demands while transporting light-duty equipment.

The HET is designed to rapidly transport battle tanks, fighting and recovery vehicles, armored vehicles and construction equipment, as well as their crews, so they arrive in mission-ready condition. The latest Oshkosh

HET A1 configuration includes increased horsepower, a six-person armor ready cab, higher capacity front suspension, electrical upgrades, and improved diagnostics and standard air conditioning.

The U.S. Army's heavy fleet, currently in production by Oshkosh Defense, also includes the Palletized Load System (PLS). Production of the new HEMTT A4s and HETs on these awards is expected to begin in April 2012 and be completed in September 2012. Recapitalization of the HEMTT A4s began in May and is scheduled to be completed in September 2012. Together, these orders have a value of more than $252 million.

Contracts

Lockheed Martin Receives $58 Million Contract Award for Vehicle-Mounted And Portable Sensor Systems

ORLANDO, FL -- Lockheed Martin received a $58.6 million contract from the U.S. Marine Corps for new systems, equipment and support services associated with the Vehicle Optic Sensor Systems II (VOSS II) and Portable Rapid Deployment Surveillance Systems (PRDSS).

The Gyrocam VOSS, a vehicle-mounted sensor system, can be mast-mounted on virtually any land vehicle or expeditionary system for remote surveillance needs, providing high-resolution color, night vision and thermal sensors in a 15-inch class gyro-stabilized gimbal.

The Gyrocam PRDSS, a free-standing, portable, rapid deployment surveillance system, can be easily moved and set up in urban, rural and extreme terrain environments and provides command personnel a bird's eye view of activity in the area.

"The VOSS and PRDSS provide the Marines with the warfighting capability necessary to meet their evolving mission needs," said Jay Pitman, director and general manager of Lockheed Martin Gyrocam Systems, LLC. "Thanks to a combination of rugged design, along with our strong in-theater support team, the Marines have been able to maintain an exceptional operational readiness rate for the VOSS and PRDSS while operating in harsh and remote environments."

Under the contract, Lockheed Martin will provide 110 VOSS II and 30 PRDSS, plus additional field services and equipment in support of these systems. The equipment will be produced at the Lockheed Martin Gyrocam Systems facility in Sarasota, Fla., and the period of performance will continue through March 2012.

Lockheed Martin Gyrocam Systems has installed more than 900 Gyrocam camera systems on Mine Resistant Ambush Protected vehicles throughout Afghanistan and Iraq. These systems provide warfighters with crucial capabilities to conduct threat surveillance missions in the harshest environments.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 126,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation's 2010 sales from continuing operations were $45.8 billion.

Future Technologies

GPS Anti-Jam Technology revealed

GAJT (GPS Anti-Jam Technology) optimizes battlefield performance by nullifying the effect of multiple GPS jammers.

QinetiQ and NovAtel Inc. have brought together their unique skills and technologies to launch GAJT (pronounced "Gadget"), the world's first single-enclosure GPS anti-jam system which is a stand-alone, rugged enclosure that mounts to the exterior of vehicles.

Intentional jamming and unintended interference of GPS can completely deny a position solution and timing over a wide area. GAJT is a seven element controlled reception pattern antenna (CRPA) that nulls jammers, ensuring GPS positioning capabilities are retained during combat, training or other vehicle-based missions.

As an externally mounted single-unit enclosure, no additional electronics are necessary inside the vehicle; only power and a single RF cable are required to connect to legacy GPS receivers. The simplicity of its design results in faster installation, minimal vehicle downtime and training, and makes the antenna easier to integrate into new platforms, or retrofit onto existing platforms or fleets and works with standard military and civil GPS receivers.

Cathy Kane, QinetiQ Managed Services Director of Technology Insertion said, "We are delighted to be partnering with NovAtel to bring this much-needed and exciting force protection product to market. I have been particularly impressed at the way the people from NovAtel and QinetiQ have brought their different skills together to form an effective team."

Michael Rittter, President and CEO of NovAtel stated, "GAJT is the first GPS anti-jam system that is small enough, and at a price point that makes sense to use on land-based military vehicles such as LAVs (light armoured vehicles)." Mr. Ritter added, "We are extremely pleased to have developed a game-changing product that will protect the positioning and blue force tracking of troops on the ground, and potentially save the lives of personnel who encounter jammers while in theatre."

GAJT is a commercial off-the-shelf (COTS) product, providing short order lead times and enabling quick deployment to the field. Manufactured in Canada, and incorporating Canadian and UK technology, GAJT only requires Canadian and UK export approval, which means exporting to authorized customers in foreign countries is greatly simplified.

NovAtel will accept orders for GAJT from authorized customers in the third quarter of 2011. Additional information on GAJT can be found at www.novatel.com/GAJT.

Future Technologies

Successful Flights for Elbit Systems` Skylark® I LE UAS Operated by a Dominator® Command & Control Unit Located on the Soldier`s Vest

Haifa, Israel -- Elbit Systems announced today that it completed a series of successful tests of its Skylark® I LE mini/man-pack UAS using the Dominator® hardware to control and operate the UAS.

During the tests, the Skylark was operated by a new cutting edge lightweight Forward Ground Control Station (FGCS) which utilizes the Dominator® organic hardware solution. This new operational concept answers the modern battlefield's requirements for interoperability and SWAP (Size Weight and Power), enabling infantry forces to execute more complex missions in diverse arenas while offering enhanced operational flexibility.

Reducing more than 15kg of the contemporary Skylark® ground control system, the FGCS is comprised of four main components aside from the UAS, all of which are geared on the soldier's vest: FGCS computer (PDU), tactical hand-held display, operator stick and an active Skylark® Rambo transducer that fits as an additional radio into the soldier's vest. For covert and/or "on-the-move" operations, an eyepiece can be used instead of the hand-held display.

The FGCS allows dismounted soldiers to carry minimum gear for optimal operational efficiency, as the UAS can be launched by Dispatcher Units, transferring control of the operation to the Forward Units when the UAS reaches their range. Offering a new operational concept, this new lightweight ground station solution is ideal for covert and special operations where a small hardware signature is required. The tests confirmed the usability of the new hardware configuration and the preservation of all unique Skylark® highly autonomous operation to the required mission range.

Contracts

Navistar Defense to Field 471 MaxxPro - Order Follows Recent MaxxPro Dash Ambulance Request

WARRENVILLE, Ill. -- Navistar Defense, LLC today announced that it received a $357 million delivery order for an additional 471 International® MaxxPro® Dash vehicles with DXM™ independent suspension.

The order from the U.S. Marine Corps Systems Command follows last month's delivery order for 250 MaxxPro Dash Mine Resistant Ambush Protected (MRAP) ambulances.

Navistar has quickly grown its fleet of MaxxPro vehicles to more than 8,700 units by leveraging its current commercial capabilities and assets, which includes the proven commercial International® WorkStar® platform. First, the company added the DXM independent suspension solution capability to new production vehicles. This was followed by orders for the new MaxxPro Recovery vehicle and most recently the MaxxPro Dash ambulance. The company has also developed a MaxxPro flatbed truck.

"We have nine major MaxxPro variants in or on their way to theater today thanks to the flexibility of our proven vehicle platforms," said Archie Massicotte, president, Navistar Defense. "The MaxxPro Dash was the first MRAP to be modified specifically for the Afghan terrain and we have continued to enhance its capabilities all along the way. Keeping our warfighters equipped is priority one."

While the MaxxPro family of vehicles has contributed to Navistar's growth into new markets, the company has fielded more than 32,000 vehicles since 2004. This includes sales of the MaxxPro, International® MXT™, as well as vehicles based on the International® PayStar® and WorkStar platforms.

Production of the new units will occur in Garland, Texas, and West Point, Miss. Deliveries will be completed by September 2011. MaxxPro Dash vehicles are powered by MaxxForce® 9.3D engines.

Navistar International Corporation is a holding company whose subsidiaries and affiliates produce International® brand commercial and military trucks, MaxxForce® brand diesel engines, IC Bus™ brand school and commercial buses, Monaco® RV brands of recreational vehicles, and Workhorse® brand chassis for motor homes and step vans. It also is a private-label designer and manufacturer of diesel engines for the pickup truck, van and SUV markets. The company also provides truck and diesel engine service parts. Another affiliate offers financing services.

Future Technologies

Rheinmetall unveils new HE DM11 secondary ammunition for MBT 120mm smoothbore gun

Rheinmetall recently revealed a new 120m HE round to a group of international experts at its proving ground in Unterluss, Germany. It can be fired from any in-service 120mm smoothbore gun (L44 and L55).

Dubbed the DM11, the new ammunition was developed on behalf of the German Ministry of Defence. It enables main battle tanks to respond more effectively to a variety of contemporary threats.

The round has already been fielded by the US Marine Corp, which refers to it as the Multipurpose (MP) DM11. The Marines use it primarily for engaging non-armoured and lightly armoured targets in asymmetric encounters. Its long range makes a significant contribution to protecting friendly forces from attack by enemy combatants armed with short- and medium-range weapons.

From the technical standpoint, the HE DM11 stands out in two ways: it is programmable when loaded and features an airburst detonation capability. Modularly designed, the 120mm x 570 HE Temp DM11 consists of an IHE (Insensitive High Explosive) warhead with a programmable fuse and ballistic cap, a tail unit, driving band, a combustible case with a propelling charge, a newly designed stub case with primer and an integrated data link cable for programming.

Interfaces between the propulsion system and the warhead and between the propulsion system and the fuse ensure that the propulsion system can be exchanged once its service life expires; it will also be possible to exchange the fuse in future at reasonable cost. A further unique feature of the DM11 is that it safe to fire in all climate zones (-46oC to + 71oC).

The HE DM11 is principally used for engaging non-armoured and lightly armoured vehicles, antitank positions (both dug-in and in the open) and field fortifications. Furthermore, it can be employed – thanks in part to its high precision and long range – for penetrating walls and taking out targets in buildings, as well as for creating breaches and avenues of approach in built-up areas to support dismounted troops. To enable optimum exploitation of the new ammunition's full tactical potential, it features three different fuse modes:

- Impact fuse mode/point detonation: the warhead detonates when it hits the target surface, creating a large breach;
- Programmable delay/point detonation with delay: the warhead detonates after penetrating the target;
- Programmable airburst mode: here, at ranges of up to 5,000 metres, the warhead detonates in front of, or above, the selected target.

Easy-to-add programming kit

A further design imperative was the ability to program the ammunition without altering the fire control unit. (In the Leopard 2A4, most of these are still analogue; in subsequent versions of the vehicle they are already partly digital.) This ensures that the ammunition can be fired from any Leopard 2 tank gun.

In addition, the necessary programming kit – developed by Rheinmetall at its own expense – had to be easily installable in existing tanks, with the need for new components, special tools or testing equipment kept to a minimum. After all, it was important for the crew to be able to engage targets without having to change well-rehearsed operating procedures.

To make sure that the ammunition and programming kit could be used in other MBT with the same main armament, the developers adhered to the internationally agreed interface control documents for 120mm tank main armament.

The programming kit comprises an ammunition communication module (ACM) for programming the fuses; an interface box between the ACM and the fire control unit that generates all relevant data for the ACM; and an add-on control box/ACM for the gunner/loader control console. The kit can be retrofitted into existing systems without major modification.

Robots

iRobot Receives $7.4 M Order for SUGVs

Bedford, Mass. -- iRobot Corp., a leader in delivering robotic technology-based solutions, has

received a $7.4 million order from the U.S. military for Small Unmanned Ground Vehicles (SUGV).

The company expects to complete delivery of the robots by the end of June. Additional details about the order and customer are not available.

SUGV, a tactical mobile robot, gathers situational awareness in dangerous conditions for warfighters and public safety professionals.

"SUGV robots give the operator a chance to assess potential threats before sending in personnel," said Robert Moses, president of iRobot's Government and Industrial Robots division. "A better understanding of the operating environment results in greater mission success and more lives saved."

iRobot and Boeing developed the SUGV family of unmanned ground vehicles under a strategic alliance that began in 2007.

Contracts

Force Protection Receives $22.48 Million in Awards to Extend Field Service Representatives

Force Protection Industries, Inc., a FORCE PROTECTION, INC. group company, today announced it has received two firm fixed price modification awards under contract M67854-07-D-5031 totaling approximately $22.48 million from U.S. Marine Corps Systems Command for the extension of field service representatives in Afghanistan.

On June 14, 2011 Force Protection received a $14,430,546 firm-fixed-price modification under previously awarded firm-fixed-price, indefinite-delivery/indefinite-quantity contract (M67854-07-D-5031) for a six-month renewal of 87 field service representatives and their life support to install spall liner blanket kits, independent suspension kits, modernization safety kits and conduct general maintenance on the Cougar Mine Resistant Ambush Protected vehicle fleet supporting Operation Enduring Freedom.On June 15, 2011 Force Protection received an $8,089,860 firm-fixed-price modification under previously awarded contract (M67854-07-D-5031) for a six-month renewal of 43 field service representatives to support operations at Vehicle Support Facility-Afghanistan.

Work on both modifications will be performed in Afghanistan, and is expected to be completed by Dec. 31, 2011.

Randy Hutcherson, Chief Operating Officer of Force Protection, said, "The important sustainment, upgrade and modernization work continues for the Cougar vehicles in Afghanistan. We are pleased to continue to provide this critical service to our Marine Corps customer to support the ongoing operations in Afghanistan."

Defence Industry

Bushmaster Order a Vote of Confidence in Australian Industry

Thales Australia has signed a contract to supply another 101 Bushmaster vehicles to the Australian Department of Defence.

The contract is a further vote of confidence in the Bushmaster, which has performed well on operations and helped save the lives of numerous Australian troops. The new Bushmasters will be used to replace damaged vehicles, and to support current and future operations.

"This success is the result of extensive R&D, engineering and Australian manufacturing expertise," said Chris Jenkins, Thales Australia's CEO.

"The teams based at our facility in Bendigo, Victoria, have wide-ranging skills and experience that enable us to work closely with the Defence Materiel Organisation and the Australian Defence Force to continually enhance the Bushmaster family of vehicles to meet evolving requirements.

"We greatly appreciate this vote of confidence by the Commonwealth not only in our own workforce, but also the specialist skills found in the many Small to Medium Enterprises that make up a significant part of the Bushmaster supply chain.

"Once again, this shows what Australia's defence industry can achieve, and the benefits of being close to the customer while having the local capabilities to meet specific local needs.

"For our Bendigo workforce this will mean continued production through 2012. We will continue to vigorously pursue opportunities for the Bushmaster Single Cab Utility Vehicle and the new Hawkei in order to maintain the viability of Bendigo production. Export opportunities are also being pursued, with the Bushmaster already securing export sales of over $100 million."

The contract takes the total number of Bushmasters ordered by the Department of Defence to 838.

Contracts

Oshkosh Defense to Supply M-ATV Protection Kits and Installation Support to U.S. Military

OSHKOSH, WI -- Oshkosh Defense, a division of Oshkosh Corporation, will supply more than 5,100 MRAP All-Terrain Vehicle (M-ATV) protection kits to the U.S. military following an order from the U.S.

Army TACOM Life Cycle Management Command (LCMC).

The protection kits were designed to address the ever-changing and increasing threats in theater including improvised explosive devices (IED). Under a separate order, Oshkosh was also selected to provide tooling and labor to support installation of the protection kits.

"The M-ATVs are specifically designed to offer troops optimal protection and mobility on the battlefield," said Ken Juergens, vice president and general manager of Joint Programs for Oshkosh Defense. "The advanced Oshkosh design easily accommodates the underbody protection kits, offering added protection without sacrificing payload."

In addition to its battle-proven armor configuration and ability to accept add-on protection kits, the M-ATVs are equipped with TAK-4® independent suspension systems to provide durable, best-in-class mobility while maintaining full payload capacity of 4,000 pounds and 70 percent off-road profile capacity.

The awards have a combined value of more than $245 million. Deliveries under the order for protection kits are expected to be completed by July 2012. The company has received awards to date for more than 8,100 M-ATV protection kits. Delivery of tools is expected to occur in July 2011. The labor contract is anticipated to last one year, beginning this summer.

Contracts

BAE Systems Awarded $14 Million to Support Fielding Vehicles for the Iraqi Army

ANNISTON, Alabama –- BAE Systems was awarded a $14.2 million contract to provide field service representatives to support the transition activities of 1,026 refurbished M113A2s and 21 refurbished M88A1s to the Iraqi Army.

This work will include maintenance support and training to the crews and units that will operate and maintain this equipment.

"We have provided this type of support to U.S. allies and partners for decades, and understand the importance of helping to increase capabilities for the Iraqi Army," said Robert Houston, vice president of the Readiness and Sustainment business at BAE Systems. "The training and support we are providing will give Iraqi soldiers the knowledge and confidence they need to operate this U.S. equipment."

These work directives were awarded by U.S. Army TACOM Life Cycle Management Command in support of foreign military sales to Iraq.

BAE Systems is a world class provider of training and field service representatives, with over 1,000 people deployed in several countries, supporting U.S. military forces and its partners and allies.

The contract award builds on earlier work BAE Systems completed in support of foreign military sales to Iraq. Under previous contracts, BAE Systems delivered 618 Iraqi Light Armored Vehicles and eight M88A2 Heavy Recovery Vehicles to the U.S. Government in support of Iraq's Armed Forces. BAE Systems is also providing training and field service representatives to support Iraq's fielding of the M88A2s. The work will be performed in Iraq.

Defence Industry

KONGSBERG Logs CROWS contract valued at NOK 315 Million

KONGSBERG has booked an order valued at NOK 315 million from the US Army. The order is part of the increase of the Common Remotely Operated Weapon Stations (CROWS) framework agreement for up to 11.690 systems signed in February 2011.

The initial CROWS II framework agreement was disclosed on 22 August 2007.

CROWS is a joint acquisition program for weapon stations for the US Army`s vehicle programs. A common solution will result in substantial efficiency gains in respect of protection, training, support and further development.

The Protector Weapon Control System protects military troops by allowing the vehicle's weapons to be operated from a protected position inside the vehicle.

Defence Industry

DRS Tactical Systems, Inc. Launches Asset Trade-In Program For ARMOR Customers

PARSIPPANY, N.J. -- DRS Technologies, Inc., A Finmeccanica Company, announced that its Tactical Systems Group recently created its newest ARMOR™ offering, the Re-ARMOR™ trade-in and free recycling program.

As a leader in rugged mobile solutions, ARMOR™ provides computing systems that meet the stringent

demands of mobile workforces around the world. By partnering with AnythingIT, a leader in information technology (IT) re-use & recycling, ARMOR™ has expanded its product offering to include asset trade-in, data destruction, and recycling for its customers.

"Re-ARMOR™ benefits our customers by removing many of the environmental issues associated with disposal of their old electronic equipment. It's a great incentive for new customers to join the ARMOR family," said Mike Sarrica, vice president and general manager for DRS Tactical Systems.

Re-ARMOR™ helps to manage the retirement of legacy equipment, which can put a strain on internal IT departments. The program provides trade-in options for virtually any type of IT product. The process is simple, concise and, in many cases, financially favorable as it can help to reduce a company's cost of ownership in technology hardware.

Beyond the earth-friendly advantages, Re-ARMOR™ provides the highest possible trade-in values on legacy equipment in a way that is compliant with all government and environmental regulations. The program meets the expanding federal and state regulations for data security by utilizing facilities that are certified by the Environmental Protection Agency and Department of Environmental Protection.

Defence Industry

Marauder armored vehicle featured in Top Gear

Top Gear episode 1 of season 17 aired last night on the BBC featuring a high-mobility armoured personnel carrier called the Marauder.

Claimed to be the "world's most unstoppable vehicle" the Marauder can provide protection against mines, IEDs and ballistic attack. It can also carry up to 10 fully armed troops and can be configured in a number of variants depending on the role.

Designed and built by the Paramount Group of South Africa, Top Gear sent co-host Richard Hammond there to put the Marauder through a series of extreme challenges. Without breaking a sweat, the Marauder flattened cars, smashed through brick walls and fended off attacks by hungry lions in the South African bush. As a finale, a Marauder and a Hummer were blown up in explosions simulating the roadside bombs faced daily in conflict zones. The Hummer was totally destroyed, but the Marauder was barely damaged and drove away.

Ivor Ichikowitz, the Executive Chairman of the Paramount Group, said: "Despite the fun working with Top Gear, it is important to remember soldier protection is a very serious issue for armies worldwide. We are talking about saving lives. With this type of technology available and the ever present threat of IED's there really is no excuse for governments not to provide the best protected vehicles for their defence forces."

Weighing around 15 tons, the Marauder can carry 3 tons, hit a maximum speed of 120 km/h (75 mph), can be used as an infantry patrol vehicle, a command center or an ambulance while withstanding explosions of 14kg of TNT under its wheels and 7kg under its hull as well as rocket attacks.

Contracts

BAE Systems Wins Vehicle Installation Subcontract from Elbit Systems

ADELAIDE, Australia –- BAE Systems has been awarded a $4.9M AUD contract from Elbit Systems to upgrade 777 military vehicles, as part of the Australian Army's Land 200 Program (Land 75/ Land 125).

As a major subcontractor to Elbit Systems, BAE Systems will prepare these vehicles, including Macks, Unimogs, Bushmasters and M113 Armoured Personnel Carriers, for the installation of a Battle Group and Below Command, Control and Communications (BGC3) system.

BAE Systems Australia will carry out the installation activities on the Mack, Unimog and Bushmaster vehicles at the Meeandah Military Facility in Brisbane, and on the M113 APCs at the new 7RAR Facility at Edinburgh Parks in northern Adelaide.

Managing Director of Elbit Systems in Australia Shlomo Weizer said: "We have selected BAE Systems Australia because of the company's vehicle systems installation capabilities. It demonstrated the technical capability, skilled workforce and capacity to deliver this work across two states."

In March 2010 Elbit Systems, Elbit Systems was awarded an Australian Government contract for the supply, integration, installation and support of a BGC3 system for the Land 200 Program.

This program will enable the Australian Army to achieve a major portion of its network centric warfare milestone.

BAE Systems contract with Elbit Systems runs from December 2010 to January 2013.

"BAE Systems is pleased to be working with Elbit Systems. We believe our experience in vehicle systems integration and engineering design, plus the ability to use the capability of our Defence Logistics team in Brisbane, makes us the right fit," said Kim Scott, Director Land and Integrated Systems.

Defence Industry

Oshkosh Defense to Showcase M-ATV Tactical Ambulance at the AUSA`s Army Medical Exposition

OSHKOSH, Wis. -- Oshkosh Defense, a division of Oshkosh Corporation), will feature its MRAP All-Terrain Vehicle (M-ATV) tactical ambulance at the AUSA's Army Medical Exposition taking place June 27-29 in San Antonio, Texas.

The M-ATV tactical ambulance offers an enhanced design that exceeds the military's original M-ATV ambulance survivability requirements and delivers exceptional off-road mobility so military medics can reach and care for injured personnel in challenging operating environments.

"The M-ATV tactical ambulance is the lightest and most mobile MRAP ambulance available to Warfighters today, and it delivers MRAP-level protection mirroring the protection on M-ATVs now equipped with underbody improvement kits to keep them safe on the battlefield," said Ken Juergens, vice president and general manager of Joint Programs for Oshkosh Defense. "As we have proved since we started work on the M-ATV program, Oshkosh has the production capabilities to deliver this vehicle in response to urgent needs in the field."

The M-ATV tactical ambulance's seating arrangement accommodates two litter and two ambulatory patients, or any combination thereof, providing increased capacity and configuration flexibility. Additionally, it takes less than two minutes to load two litter-bound patients into the vehicle for reduced exposure to enemy fire, less movement of the patient, and quicker evacuation and treatment of injured personnel. The vehicle delivers MRAP Level II protection and is designed to fit all government-furnished ambulance equipment easily.

Oshkosh has received orders for more than 8,300 M-ATVs to date. The company is supplying the M-ATV base and the M-ATV Special Forces Vehicle (SFV) to the U.S. armed forces, and has designed other variants such as the tactical ambulance based on needs identified in theater. The M-ATV is five tons lighter than any other MRAP and offers the best off-road performance thanks to the Oshkosh TAK-4® independent suspension system.

Oshkosh Defense leadership will be at the AUSA's Army Medical Exposition to discuss the vehicle and more at booth #321. The event is being held at the Henry B. Gonzalez Convention Center.

Contracts

Textron Marine & Land Systems to Supply U.S. Army with 65 Additional Armored Security Vehicles

NEW ORLEANS -- Textron Marine & Land Systems, an operating unit of Textron Systems, a Textron Inc. company, announced today that the U.S. Army Contracting Command, Warren, Mich., has exercised a contract option, valued at $49,613,572, for the company to supply the Army with 65 additional M1117 Armored Security Vehicles (ASVs).

Vehicle manufacturing will take place at Textron Marine & Land Systems facilities in the New Orleans area. The company has produced 3,161 ASVs for the U.S. Army, and has achieved 68 consecutive months of on-time delivery to the Army on the ASV program.

The ASV is a 4X4 wheeled armored vehicle that offers significant crew protection through its V-shaped hull design, and employment of multiple layers of armor, defending against small arms fire, artillery projectile fragments, Improvised Explosive Devices (IEDs) and land mines. It also uses a four-wheel independent suspension system to deliver superior mobility, agility, handling and ride quality.

"For more than a decade our Louisiana-based employees have worked hard to design and manufacture ASV products that deliver outstanding performance across a wide range of challenging environments, while providing our soldiers exceptional levels of security, mobility and protection," said Textron Marine & Land Systems Senior Vice President and General Manager Tom Walmsley.

The ASV family of vehicles performs a variety of missions including scout, infantry personnel carrier, reconnaissance, command and control and maintenance. U.S. Army ASV missions include operations with the Military Police, convoy protection, perimeter security, as well as Field Artillery Combat Observation and Lasing Teams (COLT) with the M1200 Armored Knight configuration.

Future Technologies

Textron Systems and Rheinmetall Canada Team on TAPV Program

Ottawa, Canada -- Textron Systems Canada Inc., a Textron Inc. company, and Rheinmetall Canada Inc. today announced a teaming arrangement in pursuit of the Department of National Defence (DND) and Canadian Forces Tactical Armoured Patrol Vehicle (TAPV) program. The DND is expected to award a contract to procure up to 500 vehicles with an option for up to 100 more.

Textron's proposed TAPV, specifically engineered to meet Canadian Forces requirements, draws on the company's more than 45 years of experience in the design and production of armoured vehicles. Building from the very successful Armoured Security Vehicle platform, Textron's TAPV is designed to deliver the best

blend of survivability, mobility, versatility and lethality for a broad spectrum of operations in the world's most challenging environments.

The comprehensive, modern design of Textron's TAPV is aimed at shielding troops from roadside bombs and blasts while providing large power reserves for future electronics enhancements, with an ergonomically-designed interior for optimum comfort and payload. The vehicle has been tested extensively to confirm ballistic, blast, mobility and reliability levels that meet or exceed Canadian Forces requirements.

If awarded the TAPV project, Textron Systems Canada, as prime contractor, would provide overall program and configuration management, act as the design authority for change management, coordinate vehicle integration activities by Canadian subcontractors, provide long term product support, and implement the Industrial Regional Benefits program.

"Textron plans to engage Canadian companies for the manufacture and integration of various components, vehicle assembly and life-cycle support," said Neil Rutter, general manager of Textron Systems Canada. "These essential activities will deliver a TAPV that helps Canadian soldiers achieve their missions safely and effectively."

Under the teaming agreement, Rheinmetall Canada would perform multiple integration functions and final vehicle assembly to include the remote weapons station and government furnished equipment, and play a large role in the program's long term system support.

"We are very pleased to be part of the Textron TAPV Team," said Rheinmetall Canada President and CEO, Dr. Andreas Knackstedt. "Our partnership promises to create high-quality employment at our Saint-Jean-sur-Richelieu, Quйbec facility during the acquisition phase of TAPV, and into the future as Rheinmetall Canada assists with the fleet's through-life support."

"Rheinmetall Canada is an excellent fit for the Textron TAPV Team, complementing our strengths to provide the best possible vehicle and support for Canada's soldiers for the next 25 years," added Rutter.

Contracts

Force Protection Receives $71.3 Million in Awards for Additional Buffalo Vehicles and Field Service

Force Protection Industries, Inc., a FORCE PROTECTION, INC. group company, today announced it has received two awards totaling $71.3 million.

The first award is a firm fixed price modification under contract W56HZV-08-C-0028 totaling $63.8 million from U.S. Army Contracting Command for delivery of 56 Buffalo Mine Protected Clearance Vehicles. Work will be performed in Ladson and is expected to begin in January 2012 and be completed by July 31, 2012.

The second award is a $7.5 million firm-fixed-price modification under previously awarded contract M67854-07-D-5031 for a six-month renewal of 55 Field Service Representatives (FSRs) to conduct general maintenance and upgrade operations on Mine Resistant Ambush Protected (MRAP) vehicles. Work will be performed in overseas theaters of operation, and is expected to be completed by Dec. 31, 2011.

Randy Hutcherson, Chief Operating Officer of Force Protection, said, “The Buffalo remains the cornerstone of the U.S. Army’s route clearance operations. It has performed exceptionally well since going into initial service in 2003 and saved countless lives. Complementing our vehicle design, development and manufacturing efforts, we are also supporting the U.S. military with exceptional service and support of our vehicles. Today's announcement of the U.S. Marine Corps' extension of FSR support is another clear indicator of the key role of our vehicles in combat operations. We take pride in working closely with our customers and will continue to ensure they have the critical resources to promote operational success in the current conflict and beyond.”

Future Technologies

Active Defence System ADS tested on Fuchs/Fox

The German Bundeswehr is currently testing the newly developed standoff Active Defence System (ADS), which has already undergone successful road tests at the WTD 41 test center in Trier.

In order to thoroughly analyse how the system functions as well as its operational effectiveness, the ADS has been installed into a Fuchs/Fox armoured transport vehicle for testing purposes. The Active Defence System is designed to provide practically any standard military vehicle – not just Bundeswehr systems – with significantly improved protection from

operational threats.

The ADS belongs to a new generation of active standoff protection technologies. It is the world's most advanced and effective system for protecting military vehicles in practically all weight classes from modern operational threats, especially rocket propelled grenades, guided missiles and certain improvised explosive devices.

Adhering to the hard-kill principle, ADS is the world's only system that is capable of preventing attacks launched in the immediate vicinity of the vehicle, i.e. in a radius of approximately 10-15 metres. Sensors detect an incoming threat such as a shaped charge warhead or antitank guided missile very close to the vehicle. Within microseconds, the system springs into action, instantly destroying the incoming threat just before it hits its intended target. The downward direction of the ADS makes it the only high-performance, close-range protective system that minimizes collateral damage in the area around the vehicle.

Successful integration by Rheinmetall and ADS GmbH of an ADS system into a Fuchs/Fox armoured transport vehicle demonstrates that legacy vehicles can be modified for current operational scenarios. First fielded by the German armed forces some thirty years ago, Rheinmetall has steadily improved the protection level and combat effectiveness of this tried-and-tested three-axle wheeled vehicle by adding modular protection equipment, a reinforced chassis or an anti-spall liner for reducing the threat from fragments. The latest version, the Fuchs/Fox 1A8, also features extensive anti-landmine and IED protection, including heavy armour elements, seating decoupled from the floor of the hull, textile weapon holders as well as nets for securing all wall-mounted components. ADS technology offers active protection against antitank weapons for the first time.

The company ADS Gesellschaft fьr aktive Schutzsysteme mbH, in which majority shareholder Rheinmetall AG of Dьsseldorf holds a 74% stake, with the remainder owned by IBD GmbH of Lohmar, has now booked a first serial production order for the system.

Other NATO armies are currently showing great interest in ADS technology. Experts put the number of military vehicles requiring an active protection system of this type in the tens of thousands.

Comprehensive protection competence from Rheinmetall

It takes a well-balanced combination of active and passive protection solutions and soft-kill solutions to provide military vehicles with a level of security commensurate with contemporary threats.

Rheinmetall has thus been expanding its force protection portfolio step by step, partly by buying specialist producers. Able to draw on the expertise of Rheinmetall Chempro GmbH, Rheinmetall Verseidag Ballistic Protection GmbH and ADS Gesellschaft fьr aktive Schutzsysteme mbH, the Group now has a unique array of sophisticated protection technologies at its disposal.

Protection in line with the "onion principle"

Rheinmetall's comprehensive protection concept is based on a multi-level approach. ADS – effectively serving as the first line of defence – offers an especially robust and innovative solution that neutralizes incoming projectiles before they reach their target.

However, a second line of defence consisting of passive solutions remains indispensable, including armour plates made of composite or ceramics materials. Rheinmetall is pushing forward in this field with complete solutions for military users from a single source, including bullet-resistant driver's cabs for logistical vehicles and trucks.

A series of highly effective soft-kill solutions rounds out the Group's protection concept not only for ground vehicles but also for helicopters, fixed-wing aircraft and ships. Smoke/obscurant systems such as Rosy make vehicles invisible to the enemy in the event of an attack, while Rheinmetall's MASS naval countermeasures system already sets the standard worldwide. MASS launches decoys to create phantom targets for enemy missiles that reliably lure projectiles away from their actual targets.

Future Technologies

Lockheed Martin`s HULC Robotic Exoskeleton Enters Biomechanical Testing at U.S. Army Natick Soldier Systems Center

ORLANDO, FL -- Biomechanical testing of the Lockheed Martin ruggedized HULCTM exoskeleton is now underway at the U.S. Army Natick Soldier Research, Development and Engineering Center in Natick, Mass. The testing is expected to help shape future requirements for the HULC based on feedback from soldiers.

For seven weeks, U.S. Army warfighters will be evaluated to assess the effects of load carriage with and without use of the HULC exoskeleton. Biomechanical testing will measure changes in energy expended by users, assessing how quickly individuals acclimate to the system and whether there is a reduction in metabolic cost. Testing will also determine if there is an improvement in metabolic efficiency as measured by oxygen consumption per unit total mass, when wearing the ruggedized HULC as compared to not wearing the device under identical load, speed, grade and duration conditions.

Lockheed Martin's HULC is an un-tethered, battery powered, hydraulic-actuated anthropomorphic exoskeleton that provides users the ability to carry loads up to 200 pounds for up to 20 kilometers on a single battery charge over all terrains. HULC's design allows for deep squats, crawls and upper-body lifting with minimal human exertion. An advanced onboard micro-computer ensures the exoskeleton moves in concert with the operator. HULC is an innovative solution that improves endurance and reduces the risk of injury to the soldier.

"Our latest generation of the HULC design provides unmatched flexibility, strength and endurance," said Jim Ni, HULC program manager at Lockheed Martin Missiles and Fire Control. "It will enable soldiers to do things they cannot do today, while helping to protect them from musculoskeletal injuries."

The Department of Veterans Affairs reports that the most prevalent service-connected disabilities stem from musculoskeletal system injuries.

Following successful biomechanical evaluations, the ruggedized HULC system will transition to a series of field excursions to measure its utility in simulated operational environments.

Lockheed Martin is a leading provider of advanced technology solutions for the warfighter, including wearable situational awareness, a broad range of mobility assistance systems and power management systems. Lockheed Martin is also exploring exoskeleton designs for industrial, medical and a wide variety of military mission specific applications.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 126,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation's 2010 sales from continuing operations were $45.8 billion.