

# Army Guide monthly



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## Contracts

### Oshkosh Corporation Awarded \$1.06 Billion Order for 1,700 Additional M-ATVs



Oshkosh, Wis. – July 31, 2009 – Oshkosh Corporation (NYSE:OSK) announced today that it has received an additional \$1.06 billion delivery order from the U.S. Army Tank-automotive and Armaments Command Life Cycle Management Command (TACOM LCMC). Oshkosh Defense will deliver 1,700 additional MRAP All Terrain Vehicles (M-ATV) to the U.S. Armed Forces by February 2010.

The contract also includes aftermarket parts packages to be supplied by April 2010, along with field service support. The delivery order follows an initial \$1.05 billion delivery order Oshkosh Defense received for 2,244 M-ATVs on June 30.

“At Oshkosh, our main focus is to ensure that M-ATVs are waiting in theater for the Warfighters when they arrive, rather than having the Warfighter wait for the vehicle,” said Robert G. Bohn, Oshkosh Corporation chairman and chief executive officer. “We are confident in our ability to ramp up production to 1,000 per month in December and this additional order will allow us to sustain that rate of production through February 2010.”

Oshkosh also announced it surpassed its first delivery requirements for 45 vehicles in July, by providing 46 units. “The target was 45 but we were able to deliver an additional vehicle. It’s an absolute testament to the quality and spirit of our customer, our employees and our suppliers who have come together to combine resources and work toward achieving a common mission – to serve our troops in Afghanistan,” stated Bohn.

Advance production of the M-ATV began weeks before the first delivery order was awarded. With a highly skilled workforce, decades of continuous production of tactical wheeled vehicles, robust manufacturing capabilities and available capacity, Oshkosh Defense expects to meet the government’s accelerated M-ATV delivery schedule while fully maintaining all other existing and proposed military vehicle programs.

The Oshkosh® M-ATV’s superior mobility, which includes a 70 percent off-road profile capability, is achieved through the incorporation of the Oshkosh TAK-4® independent suspension system. The system has undergone more than 400,000 miles of government testing and is standard equipment on the more than 10,000 Medium Tactical Vehicle Replacements (MTVR)

used by the Marines and Navy Seabees, and also on the Army’s next-generation Palletized Load System (PLS) and the Marine Corps’ Logistics Vehicle System Replacement (LVSr).

Oshkosh Defense teamed with Plasan North America to provide an advanced armor solution for the M-ATV. Plasan also developed the armor system used on more than 5,000 legacy MRAPs and thousands of Oshkosh Armored Cab MTVRs already in theater. Visit [www.oshkoshdefense.com](http://www.oshkoshdefense.com) for specific product information.



## Future Technologies

### DuPont and SFC Smart Fuel Cell AG to Provide Portable Fuel Cell System for U.S. Army

WILMINGTON, Del., and BRUNNTHAL, Germany -- DuPont and SFC Smart Fuel Cell AG today announced that they have received a follow-up order from the U.S. Army for the development of the M-25 fuel cell - a small, lightweight, portable power supply that can extend soldier mission times to 72 hours or more. The project cost is approximately \$3 million.

The M-25 is part of an integrated body-worn power source that can be carried by the soldier that combines DuPont’s direct methanol technology with SFC’s commercially proven fuel cell systems, products and integration expertise. Enabling a significant weight reduction when compared to conventional battery systems for multi-day missions, the M-25’s standard design, when worn by soldiers in the field for extended missions, is up to 80 percent lighter than conventional power sources, yet capable of powering a wide range of soldier equipment. In addition to its light weight for powering digital communication and navigation equipment, the M-25 delivers quiet and continuous energy, and offers independent standalone functions such as remote area battery charging and power.

The agreement is the latest step in the M-25 program, which was awarded \$1 million by the U.S. Department of Defense Wearable Power Prize in October 2008.

“This technology is a decisive advantage and DuPont is proud to partner again with SFC to address the need for lightweight, long endurance power system for soldiers,” said John D. Colven, global business manager – DuPont Fuel Cells. “The integration of our membrane electrode assembly technology within SFC direct methanol fuel cell systems will further the success of fuel cell power solutions in defense applications.”

“The new U.S. Army order reconfirms the success of our cooperation, and DuPont and SFC’s expertise in integrating the latest technologies into solutions with superior user benefits for our customers,” said Peter Podesser, CEO – SFC Smart Fuel Cell AG. “Based on this, there is a significant potential for portable and vehicle-based autonomous power applications that require full systems solutions combining fuel cells and batteries as a system. Fuel-efficient, lightweight, silent

and emission-free power sources are a unique way to achieve customer requirements and ultimate customer satisfaction.”

DuPont produces proven, science-based life-protection solutions, including some of the world's most trusted brands. Among these are DuPont™ Kevlar® and Nomex® advanced fibers and Tyvek® nonwovens used in protective apparel and equipment worn by military, law enforcement, firefighting and other emergency and defense personnel.

SFC Smart Fuel Cell is market leader in fuel cell technologies for mobile and off-grid power applications serving the leisure, industrial and defense markets. As one of Germany's technology pioneers, SFC has won numerous innovation awards. SFC has alliances with leading companies in a wide range of industries. Unlike most other fuel cell manufacturers, who are in the research and development phase or run subsidized demonstration projects, SFC has shipped over 14,000 fully commercial products to industrial and private end users for five years, and has created a convenient fuel cartridge supply infrastructure. SFC is DIN ISO 9001:2000 certified. SFC is based in Brunnthal, Germany, and has a U.S. sales and technical service office in Atlanta.

DuPont is a science company. Founded in 1802, DuPont puts science to work by creating sustainable solutions essential to a better, safer, healthier life for people everywhere. Operating in more than 70 countries, DuPont offers a wide range of innovative products and services for markets including agriculture, nutrition, electronics, communications, safety and protection, home and construction, transportation and apparel.



## Exhibitions

### Joint Personnel Recovery 2009

November 30 - December 01, 2009 Le M<sup>o</sup>ridien Piccadilly, London -- Europe's premier annual event for shaping the planning, preparation and execution of Personnel Recovery operations.

As stories of missing military personnel in Afghanistan and Iraq continue to make the headlines, national defence forces and international agencies are responding with increased attention on improving the way we prepare for Search and Rescue (SAR) and Personnel Recovery (PR) operations. Crucially, the military SAR/PR community is asking:

Where are the biggest capability gaps and how can we plug these?

What can be learned from current deployed operations and recent PR events?

How can we better utilise resources and increase coalition interoperability?

In announcing the 5th annual event, Defence IQ is building on its strong history of bringing together the key players in PR/SAR/CSAR from national defence agencies, industry, NATO and other international bodies to assess how training needs can be met, how resources

can be maximised and how operations can be executed to the highest possible standard. In just two days, you will analyse:

- Latest national and NATO capability needs and requirements for PR operations
- Lessons learned from current deployed operations in Afghanistan and Iraq
- Updates on roles and requirements for new and existing SAR platforms, including rotorcraft
- Advances into the drive for greater coalition standardization and interoperability
- Doctrine for, and case studies in, effective training and planning for CSAR events
- New systems and technologies for enhanced SAR capabilities



## Future Technologies

### Meggitt to develop energy efficient systems for combat vehicles



Meggitt's US-based military electronics cooling facility in California and Maryland-based Patrick Power Products Inc (P3I) are to develop a family of rugged, energy and fuel-efficient auxiliary thermal management and power systems to run and cool electronics on ground combat vehicles.

Optimised for size, weight and power (SWaP) and thermal management efficiency, the partnership aims to reduce dependence on a vehicle's main engine power by command, control and communications systems and the electronics needed to run defensive and offensive weapons and the vehicles themselves.

The systems will draw on established technology like the M1A2SEP thermal management system, 1300 of which have been produced by Meggitt for the US Army in the last decade, Meggitt's third generation combat thermal management system developed for the US Army MULE programme and the recently demonstrated US Army multi-fuel rotary auxiliary power unit produced by P3I for the Abrams Main Battle Tank.

Meggitt and P3I aim to develop and demonstrate combat-ready systems that can be integrated easily into a range of US Army and international ground combat vehicles and function reliably in all known extreme environments.

Meggitt and P3I estimate the new systems could reduce dependence on vehicle engine power by over 40% on platforms like the M1A2, M2A3 and Stryker family of combat vehicles while reducing vehicle energy and fuel consumption and the associated logistics impact by over 60%.



## Defence Industry

### General Dynamics Ordnance and Tactical Systems Fields Light Strike Vehicle

ST. PETERSBURG, Fla. -- General Dynamics Ordnance and Tactical Systems, a business unit of General Dynamics, announced today that it has successfully fielded the Internally Transportable Vehicle (ITV), also known as the Light Strike Vehicle (LSV).

These vehicles were fielded to the U.S. Marine Corps' 1st Battalion, 9th Marine Regiment in preparation for its deployment with the 24th Marine Expeditionary Unit (MEU).

The LSV, specifically designed to fly internally in the MV-22 and CV-22 Osprey tilt-rotor aircraft and the CH-53 and MH-47 aircraft, are used in a variety of operations such as reconnaissance, raids, Tactical Recovery of Aircraft and Personnel (TRAP) and airfield seizures in support of Over-the-Horizon amphibious operations, Irregular Warfare and Enhanced Company Operations (ECO).

The LSV provides the Marine Air-Ground Task Force (MAGTF) Commander with a vertically transportable, high mobility, weapons-capable platform. It can carry enough fuel, water, ammunition, and food for a 3-day mission, while safely transporting a crew of four. The LSV can be equipped with an M2 .50-cal., MK-19 or MK-240G machine gun, further enhancing the unit's mission performance and survivability.

The fielding of the LSV to 1st Battalion, 9th Marines follows the recent Initial Operational Capability of the Expeditionary Fire Support System (EFSS) on March 17 with Bravo Battery, 1st Battalion, 10th Marines, who are planned to deploy with the 24th MEU.

As the third leg of the USMC's triad of land-based fire support for expeditionary operations, EFSS is the primary close-in fire support system for vertical element of the Ship-to-Objective Maneuver (STOM) force, providing expanded fire support to amphibious and expeditionary operations. The system is comprised of a pair of Prime Mover vehicles, the 120mm M327 rifled mortar weapon, a new family of 120mm insensitive munition (IM) rifled ammunition and ammunition trailer. Marines can emplace, fire and displace the EFSS in under five minutes.

"The LSV and EFSS give the Marines greater agility and versatility in supporting expeditionary operations," said Dr. Dean Bartles, vice president and general manager of large-caliber ammunition for General Dynamics Ordnance and Tactical Systems. "Both systems are fast and reliable, giving the Marines more options and greater survivability in the field."

General Dynamics Ordnance and Tactical Systems is committed to producing high-quality products and services through the use of Lean Six Sigma (LSS) principles in support of continuous improvement throughout its business and manufacturing processes. The company is a world leader in the manufacture of large-, medium- and small-caliber direct and indirect-fire

munitions, shaped charge warheads and BALL POWDER® Propellant. It also manufactures precision metal components; and provides load, assemble and pack services for tactical missile and rocket programs. More information on General Dynamics Ordnance and Tactical is available online at [www.gd-ots.com](http://www.gd-ots.com).

## Defence Industry

### MTL Group receives BAE Systems "Chairman's Bronze Award"



MTL Group is proud to announce it has received a "Chairman's Bronze Award" from BAE Systems in the UK for the supply of processed steel armour fabrications to provide additional protection in response to recent Urgent Operational Requirements (UORs).

The award was gained after MTL adhered to strict criteria through the manufacture and supply of specific armour plate components, created with fixing kits, ready for deployment on armoured vehicles in International war zones.

Managing Director Dr Henry Shirman said: "MTL has been a major supplier to BAE Systems for a number of years now and we are delighted to receive this prestigious award"

"We are proud on this programme to have met the strict criteria demanded by BAE Systems Global Combat Systems in supplying critical armour plate components and complete assemblies to meet exacting schedules. "

"MTL Group is a major international supplier of steel and aluminium armour plate and this award further enhances our position within the Defence sector. Receiving this award from a company of the stature of BAE Systems means MTL has been recognized as a quality supplier of armour plate with the capability to react to customer's requirements quickly and efficiently."

The 'Chairman's Bronze Award' was officially presented to MTL Group at their headquarters in Sheffield, UK by Jonathan Pape, BAE Systems Programme Manager on June 5th, 2009.

**Contracts**

**U.S. Army Awards \$55 Million Task Order to SAIC**

SAN DIEGO and MCLEAN, Va. -- Science Applications International Corporation today announced it has been awarded a task order by the U.S. Army's Chief Information Officer (CIO)/G-6, to provide technical and management support services.

The task order has a one year base period of performance, two one-year options, and a total value of more than \$55 million if all options are exercised. The task order was awarded under the Information Technology Enterprise Solutions - 2 Services contract. Work will be performed primarily in Arlington, Va.

Under the task order, SAIC, along with its service-disabled, veteran-owned small business teammate SNVC, will provide technical and analytical services for the Army CIO's mission to enhance and integrate enterprise-wide information technology capabilities to support warfighter requirements. The SAIC team will provide support in areas including enterprise architecture; portfolio management; strategy; command, control, communications, computers and information technology; and operational capabilities.

"We look forward to providing these critical services to the Army CIO/G-6 organization, enabling this important customer to provide the warfighter with the technology they need to achieve decision superiority," said Peter Dube, SAIC senior vice president and business unit general manager.

SAIC is a FORTUNE 500 scientific, engineering, and technology applications company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world, in national security, energy and the environment, critical infrastructure, and health. The company's approximately 45,000 employees serve customers in the U.S. Department of Defense, the intelligence community, the U.S. Department of Homeland Security, other U.S. Government civil agencies and selected commercial markets. SAIC had annual revenues of \$10.1 billion for its fiscal year ended January 31, 2009.

**Defence Industry**

**Humvee still made in America**



WASHINGTON -- The military's High Mobility Multipurpose Wheeled Vehicle, also known as a

"HMMWV" or a "Humvee," will continue to be made in the United States, by an American-owned company.

The recent announcement that Detroit-based General Motors will sell their Hummer brand of vehicles to Chinese-based Sichuan Tengzhong Heavy Industrial Machinery Company, has no bearing on the U.S. military's Humvee.

"The Army's Humvee and the civilian Hummer look similar and share a common appearance," said spokesman Lt. Col. Martin Downie. "But the rights to produce those two different vehicles are no longer owned by the same company."

Humvee manufacturer AM General is an American company based in South Bend, Ind. The company produced the first 55,000 Humvees for the Army in 1985. The company continues today to produce the Humvee for the military.

In the early 1990s, AM General began producing a civilian version of the Humvee, calling it a "Hummer." But by the late 1990s, AM General had sold the Hummer name to General Motors.

While GM will sell the Hummer nameplate to Sichuan Tengzhong, the military's Humvee, its designs, unique performance capabilities and technologies will continue to be owned by, and the vehicle produced by, AM General.

**Contracts**

**Tognum to supply MTU Engines for the BOXER Armored Vehicle**

Friedrichshafen -- Tognum, the specialist for propulsion and power solutions and its Business Unit Engines received orders for the supply of more than 200 MTU engines for the Boxer armored vehicle (AV). The order volume amounts to approx. 17 million EUR.

Most of the engines will be supplied for Boxer vehicles of the Royal Dutch Army and a smaller part for vehicles of the German Bundeswehr. For the Boxer AVs of the German Army, MTU had received an order for the supply of engines as early as 2007. The first standard-production vehicle will be delivered to the German Army on September 23, 2009. The Netherlands will receive its first vehicles in early 2011.

"This follow-up order shows once again the confidence our customers have in our products and their satisfaction with MTUBr's performance", Rainer Breidenbach, Member of the Tognum Board with responsibility for the Business Unit Engines, emphasized the significance of the order.

The Boxer armored vehicle is powered by an MTU 8V 199 TE20 diesel engine with a power output of 530 kW (710 bhp). The engine accelerates the vehicle weighing up to 33 tons to a maximum speed of more than 100 km/h. Engine Series 199 is based on the latest design status of the Mercedes-Benz OM 500 commercial vehicle engine and has been modified by MTU for

military applications. This includes, in particular, the power upgrade in comparison to the commercial vehicle engine as well as the dry-sump lubrication in order to meet the requirements for operation at extreme inclinations. Only this way can the technical demands on military vehicles such as high power output, compact design and utmost reliability under extreme operating conditions be met.

The Boxer is a heavily-armored, off-road, 8x8 AWD vehicle which is manufactured in nine different versions. Each of them is based on a drive module which is almost identical for all versions; this drive module is supplemented by mission modules.

## Robots

### Kit Now Available to 'Robotize' Bobcat SJC Loaders

McLean, Va. -- QinetiQ North America, makers of the TALON® robots used extensively to defuse roadside bombs in Iraq and Afghanistan, announced a new large-scale robotic capability today that it has developed jointly with Bobcat Company, manufacturer of Bobcat® compact loaders, in response to the increasing size and lethality of roadside bombs and IEDs (improvised explosive devices).

QinetiQ North America's Technology Solutions Group has developed a kit that can be installed in about 15 minutes on any of 17 models of Bobcat skid-steer, all-wheel steer, or compact track loaders that are equipped with the Selectable Joystick Controls (SJC) option. This temporarily turns the loader into a remotely operated "robot" capable of using more than 37 Bobcat-approved attachments. The loader can be sent down-range to handle large, deep-buried IEDs that require actual excavation to dislodge or a bucket to lift and remove. In Afghanistan, where there are reported to be more than 100 million mines, Bobcat loaders could also be used to remotely render safe mines on building sites.

Upon completion of a mission, the kit is removed and the machine reverts to "in the seat" operation. The kit can be swapped from one SJC-equipped Bobcat loader to another by the user, allowing the mission to dictate what size machine to use along with what specific attachment works best.

The robotics kit for Bobcat loaders includes seven cameras, a microphone to enable the remote operator to hear ambient sound from the cab, three different CREW 2.1 compatible radio options, three control options (laptop, wearable and table top), green and yellow warning lights to signal robotic engagement, an anti-rollover warning system, and emergency manual shut off switches on the vehicle and on the control panel that support remote restart.

The kit's hardened electronics are rated at 156BeF to handle the solar load in places like Iraq and Afghanistan and have passed rigorous MIL-STD-810F environmental testing. Cameras include five mounted on the roof, one

in the cab and one on the vehicle looking at the load. Night vision is provided by IR Illumination and thermal imaging in addition to the white lights on the Bobcat loader itself.

"Other companies have roboticized individual pieces of earth-moving equipment, but until now, no one has created a universal kit that can quickly remotely control any Bobcat SJC-equipped loader used in the rough manner the military requires," said Dr. William Ribich, President of the Technology Solutions Group. "The kit gives the warfighter and bomb disposal teams tremendous flexibility in a cost-effective manner, given the low cost of the Bobcat loaders manufactured in high volumes for civilian uses compared to customized robots built in small numbers just for counter-IED activities."

"The versatility of the Bobcat loaders coupled with QinetiQ's expertise in remote operations, makes for a great system. The pan/tilt camera positioned where an operator's head is normally located, along with ambient sounds from the loader, gives the user the sense of operating from the seat. Operators quickly adapt to the different controllers available to make it an effective combination," said Mike Melroe of Bobcat Company.

Read more about the robotic controller kit for Bobcat loaders.

### About QinetiQ North America

QinetiQ (pronounced "kinetic") North America delivers world-class technology and responsive solutions to government agencies and commercial customers for many of their most urgent and complex challenges. QinetiQ North America is an independent, innovative technology provider that earns over a billion dollars in revenue operating with small company speed and agility while leveraging significant global resources. More than 6,400 QinetiQ North America engineers, scientists and other professionals have the mission knowledge and proven, reliable performance to meet the rapidly changing demands of national defense, homeland security and information assurance customers. QinetiQ North America is part of QinetiQ Group PLC, one of the world's leading defense and security technology companies. For more information, please visit [www.QinetiQ-NA.com](http://www.QinetiQ-NA.com).

## Army

### Israeli Field Intelligence Corps testing new Advanced Observation Vehicle

The Israeli Field Intelligence Corps are beginning operation experiments with a new observation vehicle. The vehicle is equipped with the most advanced data collecting tools in the IDF.

The Granite observation vehicle is expected to undergo operational experiment from the Field Intelligence Corps in the beginning of the year 2010. The Gaza Division unit tasked with collecting intelligence during combat will be making the military tests of the Granite vehicle.

The Granite, developed by Elta Group is expected to

replace the Raccoon as the leading observation vehicle of the Field Intelligence Corps's for collecting intelligence during combat. The unit is also using two additional vehicles: the Agile designated for use in battalions that patrol Israel's borders and the Armored Personnel Carrier designed for transport of infantry units.



The new vehicle is expected to improve the observation abilities of the Field Intelligence Corps. The vehicle is based on the shield of the Caracal Vehicle that belongs to the Ford Motor Company. This enables the vehicle to be more secure, and thus allowing its passengers to join operations safely. Additionally, the Granite crew members can prepare the vehicle for observation without leaving the car; simply by pressing a button.

A Spider Camera installed in the Granite vehicle sends live data to zeppelins from the Field Intelligence Corps and other unmanned aerial vehicles. The Spider is considered the best continuous secure camera the IDF has in its arsenal. Moreover, a radar will be installed in the Granite will be far more advanced than the radar installed in the Raccoon. The new observation vehicle will be connected to a control and monitoring system that will enable communication with other Corps at an optimal level. The camera, radar, control and monitoring system will be operated by only one person, as apposed to the Raccoon where there is a person in charge of each system separately.

The human engineering invested in the new vehicle was meticulously planned, as well as matters of human comfort. The staff will constitute four fighters as apposed to five operating the Raccoon.



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### Defence Industry

#### US Defense Industry Delegation to Iraq a Success

Washington -- The US Defense industry delegation to Iraq proved successful in meeting Iraqi Military Commanders and Defense Procurement Specialists, providing market entry and first hand market information.

The defense industry delegation started Monday, July 27 and concluded on Sunday, August 2. "This industry delegation to Iraq has provided our delegates with an excellent opportunity to network with Iraqi officials" said

Maher Giundi, Government Programs Director of New Fields. "The visit to Iraq helped our delegates to identify some of Iraq's security, sea, land, and air needs and how can US defense industry work together to strengthen Iraq's sovereignty and security."

#### Highlights of the USDID Delegation:

- Iraqi Air Force Commander LG Anwar Ahmed hosted a dinner for the USDID delegates at his Baghdad residence. The event served as a welcome and thank you for the US defense delegates, the dinner was attended by senior Iraqi Officers including the Iraqi Air Force Directorate General of Logistics.
- The US Embassy briefed the delegation on the security, political and economic situation in the country. The delegation met with the Acting Chief of Mission (US Attaché Political-Military Affairs) and other senior staff.
- Another important meeting in Baghdad was the visit to the Iraqi Ministry of Defense and the meeting with Iraq MOD M5 Strategy & Plans.
- Meeting with National Security ministry's senior officials.
- Meetings with Iraqi High Ranking Military Commanders including members of the MOD advisory board.

#### Conclusion & Recommendations

- The USDID to Iraq was successful in meeting its stated objectives
- USDID/Iraq delegates received a thorough briefing by US and Iraqi officials of the Iraqi defense and security plans.
- Delegates were able to make presentations to Iraqi Military Offices



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### Defence Industry

#### Oshkosh Defense Taps Proven Suppliers for Competitively Priced FMTV Bid

OSHKOSH, Wis. -- Oshkosh Defense, a division of Oshkosh Corporation, has delivered a competitively priced and low-risk bid for the U.S. Army's Family of Medium Tactical Vehicles (FMTV) competitive rebuy.

In addition to pre-award production and engineering investments that are being performed at no charge to the government, Oshkosh Defense has strategic relationships with almost 90 percent of the FMTV's major component suppliers. As a result of current production volumes with these suppliers, Oshkosh Defense can submit an FMTV pricing structure that is equal to, if not better than, the incumbent program.

"As with all of our programs, we are committed to supplying high-quality FMTV vehicles according to the delivery schedule and at a very competitive price," said Andy Hove, Oshkosh Corporation executive vice president and president, Defense. "The significant investments we have made in our production capabilities make us a stronger, leaner manufacturer with minimal new equipment startup costs."

Oshkosh Defense's pre-award FMTV investments include preparing the production workforce, engineering

vehicle components and purchasing tooling. The company also has independently completed the design and production of a long-term armor strategy (LTAS)-compliant FMTV cab to provide a “hot” start to the program, reduce risk and ensure timely production deliveries. As the supplier of the Army’s Family of Heavy Tactical Vehicles (FHTV), Oshkosh Defense has demonstrated its commitment to maintaining that program at affordable levels. The company will work with the Army to do the same for the FMTV.

The FMTV program is a five-year, multibillion-dollar contract award for the production of an estimated 23,000 vehicles and trailers for the Army. Oshkosh Defense is the only current manufacturer of medium and heavy tactical wheeled vehicles in the U.S. defense industry, having produced more than 67,000 military class vehicles in its manufacturing facilities. The company’s use of an advanced integrated assembly line has allowed for the simultaneous production of up to 10 vehicle models with 29 variations.

**About Oshkosh Defense**

Oshkosh Defense, a division of Oshkosh Corporation, is an industry-leading global designer and manufacturer of tactical military trucks and armored wheeled vehicles, delivering a full product line of conventional and hybrid vehicles, advanced armor options, proprietary suspensions, and vehicles with payloads that can exceed 70 tons. Oshkosh Defense provides a global service and supply network including full life-cycle support and remanufacturing, and its vehicles are recognized the world over for superior performance, reliability and protection. For more information, visit [www.oshkoshdefense.com](http://www.oshkoshdefense.com).

Located at Fort Eustis, Va., SOMPE provides integrated mission planning software to the U.S. Special Operations Command (USSOCOM).

QinetiQ North America’s Mission & Performance Planning Technology team has provided mission planning software products to the U.S. Army Special Operations Command (USASOC) since 1994, operating then as Great Pond Technologies, which was acquired in 2002 by Westar Aerospace & Defense Group which, in turn, was acquired by QinetiQ North America in 2005.

“Integrated with the Defense Department’s Portable Flight Planning System, our software gives special operations pilots added confidence that their aircraft will complete their assigned missions as planned,” said John Lewis, Vice President, Special Operations Programs.

Through subsequent contracts, QinetiQ North America developed flight performance models and performance planning calculator applications for all rotary-wing aircraft assigned to the USASOC. Recently, these mission planning tools have been expanded to cover a number of C-130 variants flown by the AFSOC (Air Force Special Operations Command). The C-130 Hercules is a four-engine turboprop military transport aircraft.

**About QinetiQ North America:**

QinetiQ North America delivers world-class technology and responsive solutions to government agencies and commercial customers for many of their most urgent and complex challenges. QinetiQ North America is an independent, innovative technology provider that earns over a billion dollars in revenue operating with small company speed and agility while leveraging significant global resources. More than 6,400 QinetiQ North America engineers, scientists and technicians have the mission knowledge and proven, reliable performance to meet the rapidly changing demands of national defense, homeland security and information assurance customers. QinetiQ North America is part of QinetiQ Group plc, (QQ.LSE), one of the world’s leading defense and security technology companies.

**Defence Industry**

**U.S. Special Operations Selects Qinetiq North America For Advanced Mission Planning Tools**



HUNTSVILLE, Ala. -- The U.S. Army Aviation Integration Directorate, Aviation & Missile Command (AMCOM) and the U.S. Special Operations Mission Planning and Execution (SOMPE) Program Office awarded QinetiQ North America a contract for the continued design, development and maintenance of Advanced Mission Planning Tools (AMPT).

Awarded to the Company’s Systems Engineering Group, the indefinite delivery, indefinite quantity (IDIQ) contract has a five-year period of performance and a \$10 million ceiling.

**Future Technologies**

**Lockheed Martin Joint Light Tactical Vehicle Exceeds 50,000 Miles of Operational Testing**



OWEGO, N.Y. -- Lockheed Martin's first four operational Joint Light Tactical Vehicle (JLTV) prototypes, featuring at least one prototype in each vehicle category and including two variants of the



Category B model, have successfully exceeded 50,000 combined miles of testing. To best simulate mission conditions, the prototypes are undergoing 2,000 miles of rigorous secondary and off-road testing weekly.

"From the time we formed our JLTV Team more than four years ago, one of our standing objectives has been to literally drive risk out of the JLTV program," said Lou DeSantis, vice president of JLTV Systems at Lockheed Martin. "Through prototyping and off-road testing, we're doing just that. Surpassing the 50,000 test mile threshold emphasizes our commitment to delivering a mature, low-risk family of vehicles for the U.S. Army and Marine Corps as quickly as possible, and also speaks volumes to the hard work and dedication of our entire JLTV Team."

Lockheed Martin's current JLTV family of vehicles includes four prototypes, all of which are in system test:

- The original Infantry Carrier JLTV Category B model, which is designed for troop transportation and was unveiled in October 2007;
- The Utility Vehicle Light Category C model, which is designed with a focus on payload and was introduced in February 2008;
- The General Purpose Mobility Category A model, which is designed for logistical support and was unveiled in October 2008; and
- The second variant of the Infantry Carrier Category B model, which made its public debut at the Association of the United States Army Winter Symposium in February 2009.

The Lockheed Martin-led JLTV Team includes leaders in their respective fields. The BAE Systems Global Tactical Systems and Security & Survivability Systems businesses are providing production facilities for high volume assembly, automotive design support and advanced armor solutions for protection.

Alcoa Defense is supplying materials experience, design services and aluminum components that give the vehicle its structural strength at reduced weight. JWF -- Defense Systems is offering state-of-the-art machining and cost-effective fabrication. Lockheed Martin serves as the prime contractor and design agent, providing systems engineering, platform integration, design expertise, and program and supply chain management.

Headquartered in Bethesda, MD, Lockheed Martin is a global security company that employs about 146,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation reported 2008 sales of \$42.7 billion

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### Defence Industry

## New Fields Announces Second Defense Industry Delegation to Iraq As Successful First Delegation Concludes

Washington, DC -- As the first New Fields U.S. Defense Industry Delegation to Iraq concluded early this month, officials from New Fields announced

plans for a second delegation in October. The fruits of the first delegation are already apparent this week, as several Iraqi officials plan to visit the US for further discussions.

American companies involved in the first delegation included Boeing, L-3. New Fields representative on the ground in Iraq coordinated the event with the Iraqi Ministry of Defense to ensure its success.

"I am happy to report a successful conclusion of the first New Fields U.S. Defense Industry Delegation to Iraq and would like to extend an open invitation to American companies to join us for our second delegation on October 10-16," said Ahmed Farajallah, senior vice president, events and conferences, New Fields. "Many important relationships were forged during the first delegation and several companies in our delegation are now preparing to visit Iraq again."

New Fields is a leading provider of information on emerging markets and was the organizer of April 2004's Iraq Aviation and Defense Summit in Washington, DC July 2004's and May 2004's IOGS in Houston.

For more information on the trade delegation and future events, please contact our Washington, DC office at 202.536.5000 or visit <http://www.new-fields.com>.

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### Defence Industry

## Thor Global Defense Group Teams Up With Edm Arms



In today's ever intensifying political climate, demands for higher performance weapon systems are more present than ever. Soldiers require platforms that are easy to maintain and produce accurate and reliable results.

THOR Global Defense Group has proudly announced a partnership with EDM Arms for their XM Series .408 rifles. "We have a lot of faith in this system... the numbers and proof are there," says Larry Knesek, President & CEO of THOR "It's capable of delivering results for today's troops in an excellent package"

Little information is currently being released regarding upcoming modifications to the current rifle system aside from the statement that .408 Rifles shipped from EDM's Hurricane, Utah based facility will feature the new "THOR Global Defense Group" markings after August 1, 2009. "We have some big plans" says Knesek.

THOR intends to expand the current dealer base considerably; as well as focus additional energy to military and law enforcement communities, both at home and abroad.

THOR's XM-Series rifle is a CNC and EDM machined receiver and bolt with a fully adjustable stock, mil-spec picatinny rail, adjustable mono-pod, adjustable

bi-pod, a 30" 1/13 twist barrel and many additional features. Also available is a simple conversion kit for those wishing to chamber their rifle in .50 BMG for dual purpose applications. To further ensure quality products for the end user, all EDM products are backed with a limited lifetime warranty against manufacturing defects.

Bill Ritchie, owner of EDM has been creating quality rifles since 1990. Ritchie's recent move to Utah from his Redlands, California office has allowed for a much larger facility and increased EDM's overall production dramatically. The relations with THOR will allow for more one on one time with customers desiring technical information, allowing EDM to focus on the manufacturing process. THOR also offers a full Armorer's Certification Course for individuals wishing to learn more about the platform.

THOR Global Defense Group was created to meet the increasing demand for advanced weapon platforms, security services, and training. THOR aids clients with high standards and special needs both domestic and abroad. THOR is able to handle all aspects of security effectively and professionally.

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### Defence Industry

## Oshkosh Defense to Showcase Advanced Military Vehicle Technologies at NDIA GVSETS

OSHKOSH, Wis. — Oshkosh Defense, a division of Oshkosh Corporation, will showcase the latest in autonomous vehicle advancements and other next-generation vehicle technologies at the National Defense Industrial Association's (NDIA) Ground Vehicle Systems Engineering and Technology Symposium (GVSETS) 2009, Aug. 18-20 in Detroit.

The company will showcase an Oshkosh demonstration vehicle with autonomous vehicle technologies. The vehicle also features other next-generation Oshkosh technologies, including the proven TAK-4® independent suspension system, ProPulse® hybrid-electric drive and Command Zone™ multiplexed electronics system.

"We take pride in the work being accomplished at the Oshkosh Global Technology Center to help today's Armed Forces better achieve success, while also shaping the fleets of tomorrow," said Andy Hove, Oshkosh Corporation executive vice president and president, Defense. "Our TAK-4 system, on both legacy MRAPs and the MRAP All Terrain Vehicle (M-ATV), is proving vital in giving soldiers and Marines the off-road mobility they need in Afghanistan. The autonomous vehicle technology Oshkosh continues to advance and evolve could help take our men and women out of harm's way and expand the capabilities of the military's tactical wheeled vehicles."

Oshkosh Defense is an industry leader in the development of autonomous vehicle technology. The company has a history of teaming with technology experts to continue breaking new ground, including working with the National Robotics Engineering Center

of the Robotics Institute at Carnegie Mellon University to incorporate a Perception Capabilities Demonstrator. This technology improves the occupants' situational awareness by fusing scanning laser ranging technology with electro-optical vision to create an immersive 3D display of their surroundings referenced to geospatial aerial imagery. In the scenario where the vehicle is traversing a previously driven route, the system is able to render imagery from both the previous and current traverse in real-time allowing a human operator to analyze the scene for changes and quickly identify potential threats such as IEDs. Future development will focus on improved localization for autonomous operations in varied environments, including areas with poor GPS coverage.

The TAK-4 independent suspension system is featured on the M-ATV and more than 10,000 Medium Tactical Vehicle Replacements (MTVR) supplied to the U.S. Marine Corps and Navy Seabees. The system provides superior off-road mobility for medium and heavy vehicles operating on unimproved roads and challenging cross-country terrain, and it is being retrofitted on more than 2,000 legacy MRAPs in Afghanistan for improved mobility. TAK-4 also is featured on the Marine Corps' Logistics Vehicle System Replacement (LVSR) and the Army's next-generation Palletized Load System (PLS A1).

The ProPulse diesel- and hybrid-electric drive system results in a smaller logistics footprint, fuel-efficiency improvements of as much as 20 percent over conventional power trains and exportable power capabilities. The computer-controlled Command Zone system, featured on the LVSR, provides in-cab diagnostics of all major vehicle systems, including the engine, transmission and braking. Its remote-diagnostics capabilities allow technicians to monitor vehicle diagnostics long distance.

### About Oshkosh Defense

Oshkosh Defense, a division of Oshkosh Corporation, is an industry-leading global designer and manufacturer of tactical military trucks and armored wheeled vehicles, delivering a full product line of conventional and hybrid vehicles, advanced armor options, proprietary suspensions and vehicles with payloads that can exceed 70 tons. Oshkosh Defense provides a global service and supply network including full life-cycle support and remanufacturing, and its vehicles are recognized the world over for superior performance, reliability and protection. For more information, visit [www.oshkoshdefense.com](http://www.oshkoshdefense.com).

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### Defence Industry

## Elbit Systems to Supply the Finnish Army with Communication Systems for euro 17 Million

Haifa, Israel -- Elbit Systems Ltd. announced that it was awarded a contract valued at €17 million to provide Finland's Ministry of Defense with high speed radio and data transmission communication

systems to be delivered during 2010 - 2012.



Bez halel (Butzi) Machlis, General Manager of Elbit Systems Land and C4I –Tadiran, noted that the selection of the Tadiran family of communication systems by the Finnish Ministry of Defense attests to the quality of these systems as well as to the customer's satisfaction by the performance of similar, previously acquired systems. Machlis added: "We hope that this contract will be followed by additional orders from both Finland as well as NATO countries and will further strengthen our position as a leading supplier of innovative radio systems worldwide."

### About Elbit Systems

Elbit Systems Ltd. is an international defense electronics company engaged in a wide range of defense-related programs throughout the world. The Company, which includes Elbit Systems and its subsidiaries, operates in the areas of aerospace, land and naval systems, command, control, communications, computers, intelligence surveillance and reconnaissance ("C4ISR"), unmanned air vehicle (UAV) systems, advanced electro-optics, electro-optic space systems, EW suites, airborne warning systems, ELINT systems, data links and military communications systems and radios. The Company also focuses on the upgrading of existing military platforms and developing new technologies for defense, homeland security and commercial aviation applications.



## Defence Industry

### Boeing and MillenWorks to Demonstrate Tactical Military Vehicle in Off-Road Event

ST. LOUIS -- The Boeing Company and partner MillenWorks of Tustin, Calif., will participate this week in a 1,000-mile off-road race through the Nevada desert, using a derivative of a tactical military vehicle designed for U.S. special operations forces.

The Aug. 20-22 "Vegas to Reno: The Long Way" race is sponsored by the Best in the Desert Racing Association and is touted by the event's organizers as the longest off-road race in the United States. The Boeing and MillenWorks Team's vehicle is entered in a timed exhibition category but will be driven by MillenWorks founder and CEO Rod Millen and his son, Ryan, over the

same course as other off-road competitors.

The vehicle is a derivative of the Helo Transportable Tactical Vehicle (HTTV), which MillenWorks designed for military reconnaissance and utility missions in demanding conditions and terrain. The vehicle, which can be transported by aircraft including the Boeing-built V-22 Osprey tiltrotor, is currently undergoing evaluation and testing.

"We're confident that our team's vehicle has the speed, maneuverability and durability needed to endure in this challenging and unforgiving desert terrain," said Jerry McElwee, vice president of Tactical Wheeled Vehicles for Boeing Combat Systems. "We are excited to have this opportunity to demonstrate our vehicle's capabilities and reliability in off-road conditions."

"The Vegas to Reno race attracts tremendous talent from the off-road racing community, and will be a true test of our vehicle's technology maturity and cross-country mobility," said Rod Millen. "We have a high-performance vehicle with a proven track record of extensive government testing and evaluation."

Boeing and MillenWorks are teamed on a variety of government contracting activities, using their combined experience in systems engineering, product development and rapid vehicle prototyping to bring best-value solutions to their customers. Boeing has more than 20 years of experience in integrating tactical wheeled vehicles, starting with its role as prime contractor for the Avenger air defense system, which is integrated on the High Mobility Multipurpose Wheeled Vehicle. MillenWorks is an industry leader in advanced vehicle and mobility solutions for demanding applications, with expertise in designing military ground vehicles, as well as high-performance race vehicles for on- and off-road competitions.

MillenWorks is a privately owned small business based in Tustin, Calif. The company designs and develops vehicles and advanced mobility solutions for the U.S. armed forces, major automotive original equipment manufacturers and commercial customers.

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense businesses specializing in innovative and capabilities-driven customer solutions, and the world's largest and most versatile manufacturer of military aircraft. Headquartered in St. Louis, Boeing Integrated Defense Systems is a \$32 billion business with 70,000 employees worldwide.



## Robots

### Australian Defence Force selects QinetiQ's TALON robots

QinetiQ Group PLC, a leading international provider of technology-based services and solutions, has secured a AUS\$23 million contract from the Australian Department of Defence for TALON robots and replacement parts to support Australian Defence Forces deployed on operations.

Developed by QinetiQ North America in Waltham, Massachusetts, TALON robots can be configured for specific tasks including the disposal of Improvised Explosive Devices (IEDs), reconnaissance, the identification of hazardous material, combat engineering support and assistance to police units engaged in SWAT (Special Weapons and Tactics) operations. 2,800 TALON robots are deployed around the world – more than any other military robot.



“The TALON robot is an excellent example of the world-leading technology that QinetiQ is able to deliver to our clients within Australia and the region,” said Mike Kalms, CEO of QinetiQ Australia. “We continue to work closely with our UK and US colleagues to ensure QinetiQ is able to offer an increasing portfolio of leading technology and service solutions to our Australian defence customers.”

QinetiQ also provides a repair and maintenance facility for TALON robots in Australia and the region through its partner company, Pacific Security and Environmental Solutions.



**Contracts**

**Oshkosh Defense Selected to Produce U.S. Army’s FMTV, Receives First Delivery Order for \$280.9 Million**

OSHKOSH, Wis. — Oshkosh Defense, a division of Oshkosh Corporation, has been awarded a contract by the U.S. Army Tank-automotive and Armaments Command Life Cycle Management Command (TACOM LCMC) for the U.S. Army’s Family of Medium Tactical Vehicles (FMTV) rebuy program.

“We feel privileged that the U.S. Army has selected Oshkosh to produce the FMTV, an important element to the Warfighter’s tactical vehicle fleet,” said Robert G. Bohn, Oshkosh Corporation chairman and chief executive officer. “This was a highly competitive bid. We look forward to working closely with our customer on this project to meet the needs of our troops, just as we have with our other products and services.”

The FMTV rebuy program is a five-year, indefinite delivery/indefinite quantity (IDIQ) contract award for the production of up to 23,000 vehicles and trailers as well as support services and engineering. The FMTV is a series of up to 23 variant and 17 different models ranging from 2.5 ton to 5 ton payloads. The contract’s first delivery order is valued at \$280.9 million for the production and delivery of 2,568 trucks and trailers. Initial test vehicle deliveries are planned for mid-2010, followed by production vehicle deliveries later in the

year.



**Defence Industry**

**General Dynamics Receives \$100 Million from U.S. Army for Production of M2 Flex Machine Guns**



CHARLOTTE, N.C. -- The U.S. Army TACOM-Rock Island, Ill., has awarded General Dynamics Armament and Technical Products a four-year indefinite delivery, indefinite quantity (IDIQ) contract for the production of M2 flex machine guns. Production under initial delivery orders valued at approximately \$100 million is scheduled to be completed by April 2012.

General Dynamics Armament and Technical Products is a business unit of General Dynamics.

Dean Gagnon, General Dynamics Armament and Technical Products gun systems senior program manager, said, "The M2 flex is a belt-fed, recoil-operated, air-cooled, crew-served weapon capable of right- or left-hand feed. The weapon's accuracy, durability and versatility make it ideal for offensive and defensive operations."

The guns will be produced at General Dynamics Armament and Technical Products' Saco, Maine, facility, which has delivered more than 35,000 M2 machine guns to the U.S. government since 1979. Program management will be performed at the company's Burlington, Vt.-based Technology Center.



**Contracts**

**Renault Trucks Defense signs contract with Globecomm Systems Inc. for 17 Sherpa Carrier vehicles**



Renault Trucks Defense has just signed a contract

with the American company Globecom Systems Inc.

(GSI) for 17 vehicles Sherpa Carrier. These Sherpa Carrier were retained by GSI as carriers of tactical communications stations and will be qualified by US Army then delivered to NATO for the equipment of the Battalions Signal.

The 17 Sherpa Carrier will be assembled on the factory of production of the military vehicles (CPVM) of Renault Trucks Defense in Limoges during the first quarter 2010.

Following the recent success of the Sherpa Carrier with Namsa in 2007 and 2008, with Thales Alenia Space in 2009 (Syracuse III program) and NATO with the patrol armoured version, the Sherpa family signs its first success in United States.

industrial applications and has nearly 2,000 UGVs in service in more than 52 countries worldwide. The Wheelbarrow Mk8 UGV was originally developed for the disposal of improvised explosive devices in Northern Ireland. Today the Wheelbarrow Mk8 is in service with EOD units around the world, including variants designed for mine clearance.

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### Future Technologies

#### Joint Northrop Grumman and AESIR display demonstrates how UGV and UAV work together



Peterborough -- Detecting Improvised Explosive Devices (IEDs) may have got one stage easier following the demonstration of how an unmanned ground vehicle (UGV) and unmanned air vehicle (UAV) could work together at the UV Europe Conference being held at the Celtic Manor Resort, South Wales on 22 and 23 July 2009.

AESIR, developers of a family of Vertical Take Off and Landing (VTOL) UAVs, and Northrop Grumman an industry leading developer and manufacturer of UGVs for police, military and industry applications worldwide, have come together to show how the UGV can deploy the UAV into the designated area and provide a firm platform for the UAV to deploy from.

The Unmanned Vehicles demonstrating the capability are the AESIR development craft, Embler a 600mm diameter electric engined craft, and Northrop Grumman's Wheelbarrow Mk8 Plus II UGV which has been adapted by having its manipulator arm removed and replaced with a platform for the UAV.

The AESIR Embler has been developed to demonstrate the capabilities of a Coanda effect VTOL UAV in particular the inherent stability, its ability to survive low speed impact with the ground, buildings and other fixed objects and its sustained hover characteristics.

Northrop Grumman through its Remotec subsidiary based in Coventry, is an industry leader in unmanned ground vehicle systems for police, military, and