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Rheinmetall MAN Military Vehicles' HX Family at LWC 2012

Highly mobile – multi-mission capable – battle-proven

No logistics, no tactics: now more than ever, today's fast-moving armies need to be sure that their supplies keep rolling. Contemporary asymmetric conflicts lack clearly defined front lines, confronting commanders and manufacturers of modern transport, command and multi-mission vehicles with new requirements regarding mobility, functionality and survivability. The systems of the HX family, made by Rheinmetall MAN Military Vehicles (RMMV), rank among the most cost-effective in their class.

RMMV offers its HX series for Australia's LAND 121 Phase 3B program, for which RMMV was selected as preferred bidder in December 2011. At the Land Warfare Conference 2012 (LWC) in Melbourne, RMMV is displaying two different configurations from its military logistical HX series. These include the HX 4x4 and the HX 8x8.

HX 4x4

The HX 4x4 is powered by a water-cooled 6-cylinder MAN D08 diesel engine with direct fuel injection and output of 240 kW or 326 hp in the EURO 4 configuration. Measuring 7.44 metres in length, the standard version of the vehicle is extremely mobile in all types of terrain. The HX 4x4 is just as capable on highways as it is off road. Furthermore, it can cross 1.2m wide ditches and is unchallenged to ford water depths up to 1.5m. The gross vehicle weight is 20 tonnes with a military payload of 6 tonnes (subject to tyres and legislation).

The HX 4x4 is on display in Melbourne with a military tray and is fitted with the fully integrated armoured cabin (IAC) and Rheinmetall's Active Defence System (ADS). The IAC meets NATO STANAG 4569 criteria, providing the crew with excellent protection from ballistic threats, landmines and IEDs.

HX 8x8

The HX 8x8 is equipped with the MAN D20 water-cooled 6-cylinder in-line common rail engine with turbocharger and direct fuel injection. The engine's cubic capacity of 10,518 cm³ brings its output to 324 kW (440 hp) in the EURO 4 configuration. The vehicle has a gross vehicle weight of 38 tonnes with a military payload of 15 tonnes in the ILHS configuration. The integrated load handling system allows the transport of military flat racks as well as standard 20 ft. ISO containers. The result is a vehicle system that fits seamlessly into modern military intermodal operations.

On display at the Rheinmetall stand is a version of the HX 8x8 with modular armour, integrated load handling system (ILHS) and Solar Shield.

A match for modern mission scenarios

All HX vehicles are “military off the shelf” (MOTS) products specially developed for military applications. Their main priority is high mobility and reliability even in the harshest terrain.

Many other militarised vehicles are based on off-the-shelf (OTS) components. In comparison, the HX family combines tried-and-tested components from major commercial vehicle series but with a toughened low-torsion ladder frame and with other technologies especially designed to meet the needs of the military. This includes armour, self protection systems, extreme fording capabilities, multi-fuel engines and black out lighting. Right from the start, these trucks are designed not merely for greater durability on and off-road mobility, but also to operate at temperatures ranging from -32 to +49° C. Moreover, they can be equipped with protective modules and/or weapon stations for self-protection.

As a MOTS product family, RMMV’s HX vehicles not only feature outstanding mobility, protection and reliability, they also deliver maximum communality and interoperability.

This results in total ease of use as well as streamlined logistics and maintenance, since many components and assemblies of the vehicle family are common and fully interchangeable. In the UK, the net effect has been to reduce a previous logistic vehicle parts inventory stock of 30,000 line items to less than 7,000.

Operation of the vehicles is largely identical. The same applies to maintenance and repair of the vehicles, engines and drivetrains. This produces considerable synergies when it comes to training crews and mechanics as well as substantially simplifying logistics for the entire fleet of vehicles.

The multi-fuel capability and excellent supply arrangements (all maintenance-significant spare parts are NATO-codified) are further important features of the HX family.

Additional protection

If required, all of the HX vehicles can be equipped unprotected (standard), with a modular armoured cabin (MAC) or a fully integrated armoured cabin (IAC) to meet the highest STANAG or Mil-Standard specifications with regard to ballistic and mine protection. Installation of the MAC takes only six to eight hours, and can be performed by two trained technicians with the help of a lifting device.

Self Protection

The Active Defence System ADS was successfully tested last year and shown in live-fire scenarios this year on Rheinmetall’s test-range in Unterlöss. The sensor system detects incoming projectiles such as shaped charge warheads. In a matter of microseconds, the system activates a protective sector and neutralizes the incoming

object by means of directed energy immediately before it reaches its target. Because it operates in a downward direction, ADS is the only high-performance close-quarter protection system that minimises collateral damage in the immediate vicinity of the vehicle.

Deployed around the world for decades and battle proven

Rheinmetall MAN Military Vehicles has a long history in developing and supplying military vehicles systems to armed forces worldwide. Many of their vehicles are still in military operations.

The military-off-the-shelf concept of the HX family remains as compelling as ever. As such they are forming the logistic backbone of numerous armies in the world, where they are operational on a daily basis.

In 2007, the British armed forces began receiving the first of over 7,000 vehicles of the HX family, including 4x4, 6x6 and 8x8 versions. These transport, tanker and recovery vehicles are replacing the old Leyland and Bedford trucks as well as the Foden recovery vehicles, which the SX 8x8 vehicle family is superseding.

The British Armed Forces have been deploying HX and SX vehicle families in Afghanistan and previously Iraq since early 2008. The response from all levels has been extremely positive.

RMMV – outstanding systems and service from a single source

Rheinmetall MAN Military Vehicles, partly owned by Germany's Rheinmetall Group one of the oldest and most trusted names in the global defence industry, is presenting at the LWC 2012 in Melbourne, along with a wide array of other products and technologies designed for today's expeditionary focussed armed forces.

As one of the world's leading suppliers of defence technology systems, Rheinmetall supplies military forces with a comprehensive portfolio of readily available modular products.

At the beginning of 2010, Rheinmetall and MAN Nutzfahrzeuge joined forces to found RMMV. Drawing on their respective core competencies in automotive engineering and military technology, these two long-established companies have created a globally operating supplier of wheeled military vehicles. RMMV produces a complete range of protected and unprotected transport, command and mission-specific vehicles for the world's armed forces. Moreover, RMMV supplies not only systems but also service from a single source. From 1st to 4th level support, everything is possible, including on-site repair and maintenance in-theatre.

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