Breakthroughs for UK's Pearson Engineering

ABOVE: A Redback IFV fitted with a Pearson combat dozer blade during the Land 400 Phase 3 RMA. *Image: Hanwha*

UK military engineering equipment specialist Pearson Engineering has signed a number of contracts with foreign militaries for the supply of under-armour battlefield engineering attachments.

For the Polish Army and through the US Foreign Military Sales channel, Pearson will supply 99 engineering capability kits for the M1A2 Abrams SEPv3 (System Enhancement Package Version 3) main battle tanks (MBT), deliveries of which have commenced. The package includes track-width mine ploughs and combat dozer blades, as well as the Slice vehicle interface kit.

The Slice apparatus is designed to provide MBTs and other armoured vehicles to rapidly fit, operate and remove a wide range of front-end equipment (FEE). Slice can be quickly and easily installed without permanent modification to the host vehicle, therefore having no impact on the vehicle's survivability and minimal to no change to approach angle or step-height characteristics. Slice is also designed to avoid any impact on gun sweep or driver vision. The product includes an integrated hydraulic motor pump and control system, further lessening the impact on the host vehicle.

Slice can be fitted and removed from a vehicle in approximately 15 minutes using a crane and basic tools. Once fitted, FEE can then be attached to Slice in the field without tools. Dependent on the environment, this takes around 10 minutes but with suitable training can take as little as 2 minutes, Pearson states. The Slice interface allows for under-armour jettison of battle-damaged equipment.

Separately, Pearson announced on 7 April that it had been awarded a contract by Hanwha Defence Australia (HDA) for the supply of 131 combat dozer blades for the new Redback infantry fighting vehicle (IFV) being procured under Land 400 Phase 3. The Pearson dozer blade was evaluated fitted to a Redback vehicle during the Phase 3 Risk Mitigation Activity (RMA).

Initiatives are underway to localise the supply of dozer blades with the formation of a team of suppliers that will provide fabrications, hydraulic components, harnesses, assembly and testing as part of Pearson Engineering's Australian industry content commitment.

The Combat Dozer Blade will be integrated with Redback via a Pearson Engineering Vehicle Interface Kit which is designed to accept a wide range of FEE from within Pearson's product range.

With initial integration of the combat dozer blade complete, the Redback IFV can be modified to adapt according to mission requirements, with the combat dozer blade able to be swapped out for a mine plough,

counter-improvised explosive device roller or surface clearance device without further mechanical design or intervention.

The company's work with the Redback IFV leverages off the in-country integration, training and support already being provided to the Australian Army as part of Land 907 Phase 2 (M1A2 Abrams SEPv3 acquisition) and Land 8160 Phase (combat engineering vehicles). The Army's new M1A2 Abrams SEPv3 tanks will receive the Pearson combat dozer blade and track-width mine plough attachments, whilst the new M1150 assault breacher vehicles feature the proven mine clearing plough, dozer blade and lane marking system FEE combination.

Pearson is also collaborating with the UK's Defence Science and Technology Laboratory on a remotely-controlled combat engineering version of the Warrior IFV. Called Weevil, the prototype uses a Warrior – which retains a modified turret minus the 30mm cannon main armament – coupled with a track-width mine plough attachment. Remote operation is achieved using Pearson's Beacon remote control system and vehicle-mounted cameras. Weevil has passed initial trials and will now progress to further trials by the British Army.

– Ian Bostock

BELOW: The Warrior IFV-based Weevil combat engineering vehicle during recent UK field trials. *Image: UK MoD*

Covers off Japan's ship-based rail gun

The Japanese Maritime Self Defense Force (JMSDF) has unveiled its developmental naval rail gun during a recent visit by service leadership.

On 9 April, Vice Admiral Omachi Katsushi, Commander in Chief of the Self Defense Fleet, visited the 151m experimental-test bed ship JS Asuka, which belongs to the JMSDF's Fleet Research and Development Command to receive an in-person briefing on the status of the new electromagnetic rail gun.

Under development since 2016 by Japan's Acquisition, Technology and Logistics Agency (ATLA), the rail gun is able to fire solid projectiles at ultra-high muzzle velocities to achieve long range and very high terminal lethality.

It is understood the JMSDF is envisioning using rail gun technology in the naval gunfire support role and potentially as land-based coastal artillery. Ship self-defence against anti-ship cruise missiles is another potential role for rail guns in Japanese service.

ABOVE: The rail gun on JS Asuka shown during inspection by the JMSDF Commander in Chief last month. *Image: JMSDF*

In October 2023, ATLA announced that a ship-board test firing of a rail gun on JS Asuka had been carried out. Further at-sea rail gun test firings are expected by the JMSDF as system development continues.

– Staff Reporters