Heavy Tracked Vehicle Products
Pearson Engineering is a privately owned UK company that develops Combat Engineer systems and equipment to meet the needs of the world’s Armed Forces. Our particular expertise is the supply of specialized Counter-Mine, Counter-IED, Route Proving, Combat Earthmoving and Assault Bridging Equipment for Armoured Fighting Vehicles.

Assured Mobility
In the challenging, complex and uncertain land environment, Commanders need more than ever the ability to freely manoeuvre to places at times of their choosing. Our range of vehicle attachments, each optimised for a particular combat engineering role, can be interchanged and configured to deliver Assured Mobility support to combat operations.

Global Capability
Our core company values are built around a desire to serve the needs of customers and to provide solutions to their particular requirements. The company supplies equipment and services to many countries throughout the world delivering Global Capability when and where it’s needed, on time, every time.
All of our products are designed to be fitted either directly to the host vehicle or via a common interface system which allows for their quick and easy attach and release.

The common interface is suitable for all of our front-end equipment and offers the commander the flexibility to adapt to his mission. He can task organise equipment to the mission requirement and choose the best tool for the job. This approach leads to higher levels of mission success by increasing force capability and availability without increasing force structure and manpower.
The Full Width Mine Plough suitable for Heavy Tracked Vehicles is known as the FWMP(H).

It clears concealed or buried mines and IEDs found within the path of the full width of the vehicle, by bringing them to the surface and moving them wide and clear of the vehicle. This produces a safe and mine free cleared lane for following vehicles.

The product is battle proven and is in service with, amongst others, the British Army, the U.S. Army, the U.S. Marine Corps and the Finnish, Danish, Dutch and Swedish Armed Forces.

The blast resistant system comprises three main parts; two 9-tine track width blades to protect the vehicle tracks and a central 5-tine vee blade to provide full width clearance. Fold out blade extensions to each side of the system ensure that mines are pushed well beyond the width of the cleared lane.

Ploughing depth is controlled by plough skids which remain in contact with the ground at all times. The system works well in a wide range of soil conditions and ground undulations.

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**Key Features:**

1. Rapidly clears mines and IEDs from the full width of the host vehicle
2. Blast resistant and can remain fully operational after a mine detonation
3. Designed to minimise the tractive effort required
4. Capable of operating in a wide range of soil conditions
5. Low maintenance
6. Can be fitted with a MSD to counter magnetic influence fused mines
The Surface Clearance Device suitable for Heavy Tracked Vehicles is known as the SCD(H).

It clears surface laid mines and threats found within the path of the full width of the vehicle from roads, tracks and rough terrain to produce a cleared route for follow-on vehicles.

Independent segments of a full width blade follow the ground contours to move threats wide and clear of the vehicle.

The product is battle proven and is in service with, amongst others, the U.S. Army, the U.S. Marine Corps, the U.S. Air Force and the Swiss, Spanish, Swedish, Norwegian and Chilean Armed Forces.

There are two versions of the SCD(H); a Vee-blade optimised for clearing routes and a straight Angle-blade which is optimised for clearing areas.

The robust system comprises easily and rapidly replaceable blade segments to ensure operation ability, even after a blast.

Key Features:

1. Clears surface laid mines and ordnance from the full width of the vehicle
2. Vee-blade optimised for clearing routes
3. Angle-blade optimised for clearing areas
4. Proven to operate on a wide range of terrain
5. Low maintenance with replaceable blade segments
6. Optimised for the host vehicle
The Combat Dozer Blade suitable for Heavy Tracked Vehicles is known as the CDB(H).

It enables vehicles to rapidly move obstacles, creating a clear route for following operations. It is lightweight and strong and it is suitable for clearing obstacles, urban road blocks and rubble and it can also be used to move earth and to fill craters.

The product is battle proven and is in service with, amongst others, the British Army, the U.S. Army, the U.S. Marine Corps and the Finnish Army.

The CDB(H) is compact and is designed to retain the centre of gravity close to the vehicle structure. Made of high tensile, low carbon steel, the CDB(H) is capable of withstanding the high loads generated during typical earth-moving and dozing tasks. An extension fitted to the top of the blade prevents soil from spilling over and accumulating on the vehicle.

Key Features:

1. Prepares defensive positions
2. Clears obstacles, urban road blocks and rubble
3. Fills anti-tank ditches
4. It is strong and light
5. Opens routes
6. Prepares the ground for launching bridges

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The Excavator Manipulator Arm suitable for Heavy Tracked Vehicles is known as the EMA(H).

It enables vehicles to dig, demolish, remove obstacles and fill trenches to create a clear route for following operations.

The system comprises a boom, arm and bucket and a stabilising dozer blade. It is a self-contained Pearson Engineering product which includes its own Engine, Batteries and Fuel System.

Made of high tensile low carbon steel which makes the product robust and strong yet low weight, the system can also be used for light dozing and obstacle reduction tasks. During transport, the EMA(H) stows tightly against the hull of the host vehicle while the blade is raised to protect the equipment and to ensure that the centre of gravity is retained close to the vehicle structure.

**Key Features:**

1. Excavates and fills trenches, craters or ditches
2. Demolishes structures
3. Clears vehicles and other obstacles from routes
4. Suitable for light dozing operations
5. Suitable for lifting and loading tasks
6. Robust and Strong

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The Bridge Launch Mechanism suitable for Heavy Tracked Vehicles is known as the BLM(H).

It enables a combat vehicle to launch and recover assault bridging in less than two minutes from under armour without permanently changing the role of the host vehicle.

The BLM(H) is fitted to the front of the vehicle and allows the bridge to be stowed, launched and recovered using a single system. The system is lightweight and is specifically designed to minimise the impact on vehicle mobility by keeping the bridge and bridge launch mechanism low and close to the vehicle hull when in the transport configuration.

Upon launch and recover, the foot of the BLM(H) remains in firm contact with the ground, reducing the load transfer onto the host vehicle and ensuring a stable launch platform.

**Key Features:**

1. Rapid bridge launch and recovery
2. Stows compactly when not in use
3. Lightweight
4. Interchangeable with other Special to Role equipment
5. Low impact on mobility
6. Foot remains in firm contact with the ground at all times
The Light Weight Proofing Roller suitable for Heavy Tracked Vehicles is known as the LWPR(H).

It protects vehicles from buried mines and pressure initiated explosive devices by using roller gangs, which follow the ground over undulating terrain, to apply pressure to the ground ahead of the host vehicle to detonate threats before the vehicle and its crew reaches them. The LWPR(H) gives full width protection.

The system is generally used where there is a possibility, rather than the probability of the presence of threats on an intended route.

The LWPR(H) comprises two 6-wheel roller gangs to protect the vehicle tracks and a central 5-wheel roller gang to provide full width clearance for following operations.

The system is lightweight yet generates a heavy effect using hydraulic power to transfer a proportion of the vehicle weight onto the roller wheels to detonate any explosive devices. This hydraulic design avoids the requirement for self-weight roller wheels which add unnecessary weight to the host vehicle.

**Key Features:**

- Light-weight but heavy effect
- Minimal effect on vehicle mobility
- Rapidly repairable
- Robust and compact and it requires minimal maintenance
- Solid tyres resist punctures and damage
- Roller wheels follow ground contours providing constant ground contact

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The Obstacle Marker System (OMS) delivers a payload from a vehicle which can be used to mark safe lanes and areas. OMS is a Combat Vehicle mounted electro-pneumatic payload dispensing system most commonly used for marking the boundaries of routes and areas. Designed to fire marker poles into the ground at controlled intervals, the OMS gives a host vehicle the capability to clearly mark out hazardous areas such as the edges of a minefield breached lane.

An OMS comprises dispenser units mounted either side of the vehicle, compressor units mounted on the vehicle, an OMS Control Unit (OMSCU) and a set of marker poles. The dispenser unit enables marker poles to be fired pneumatically, either manually or automatically, into a variety of surfaces from sand and soil to asphalt and concrete at either timed or distance based intervals.

Key Features:

1. Provides vehicles with the capability to clearly mark out safe lanes and routes or hazardous areas
2. Low weight system
3. Can be fitted to a wide variety of combat vehicles
4. Various marker poles are available including reflective, fluorescent, day-glow and LED-enhanced
5. Capable of manual, distance or time-based firing
6. Proven and in service with numerous Armed Forces
The Magnetic Signature Duplicator (MSD) provides a magnetic signature sufficiently in advance of a vehicle to negate the effectiveness of magnetic influence mines. The MSD increases the effectiveness and survivability of countermine equipment by causing the stand-off detonation of magnetic influence mines at a safe distance ahead of the host vehicle.

The MSD generates a multi-axial magnetic signature optimised for passively fused magnetic influence fused mines.

The system comprises four emitter coils, two associated power boxes and a MSD Control Unit (MSDCU).

The system is in service with the U.S. Army and the French, Swedish, Danish, Swiss and Chilean Armed forces amongst others.

Key Features:

1. Provides stand-off detonation of magnetic influence mines at a safe distance
2. Product can be integrated onto any of Pearson Engineering’s de-mining and countermine systems
3. Enhances operational capability
4. Improves survivability
5. Provides advanced protection to operations
6. Proven and in service with numerous Armed Forces
The Remote Control System (RCS) is designed to take the man out of harm’s way when necessary. The RCS is a proven, safe and reliable means of operating unmanned military vehicles from a remote command vehicle. Originally developed for use by the British Army, the RCS employs secure digital radio link technology.

RCS operates on the master-slave principle, with the unmanned ‘slave’ vehicle controlled from an Operator Control Unit (OCU) installed inside the ‘master’ command vehicle. Multiple cameras provide all-round vision with images and performance data being relayed to the operator via a high resolution display screen.

Key Features:

1. Proven and in service with numerous Armed Forces
2. Suitable for use with a wide range of Pearson Engineering products
3. Easy to use based on commonly available remote control hardware
4. Secure digital radio link technology
5. Reduces the risk to human life of Counter-IED and Counter-Mine operations
6. Cameras provide all round vision
Products for Heavy Tracked Combat Vehicles

Pearson Engineering provides a range of equipment to support Combat vehicles during operations. Our products provide self-protection and increased mobility for Main Battle tanks when faced with a variety of obstacles.

- Track Width Mine Plough
- Combat Dozer Blade
- Self-Protection Combat Roller
The Track Width Mine Plough suitable for Heavy Tracked Vehicles is known as the TWMP(H).

It is designed to provide vehicle self-protection by clearing concealed or buried mines and IEDs by bringing them to the surface and moving them wide and clear of the vehicle. This produces a safe and mine free track width cleared lane in front of the vehicle.

The product is battle proven and is in service with, amongst others, the British Army, the Indian Army and the Singaporean Army.

The TWMP(H) has been designed to compactly stow on a Main Battle Tank. The approach angle has been maximised without impeding the operation of the gun, even when fully depressed.

The blast resistant system comprises two 4-tine track width blades to protect vehicle tracks. Fold out blade extensions to each side of the system ensure that mines are pushed well beyond the width of the cleared tracks.

Key Features:

1. Clears mines from the track width of the vehicle
2. Designed to minimise the effect of detonating mines
3. Designed to compactly stow
4. Designed to minimise the tractive effort required
5. Capable of operating in a wide range of soil conditions
The Combat Dozer Blade suitable for Heavy Tracked Vehicles is known as the CDB(H).

It is lightweight and strong and it is suitable for clearing obstacles, urban road blocks and rubble and it can also be used to move earth and to fill craters.

The product is battle proven and is in service with, amongst others, the British Army, the U.S. Army, the U.S. Marine Corps and the Finnish Army.

The CDB(H) is compact and is designed to retain the centre of gravity close to the vehicle structure. Made of high tensile, low carbon steel, the CDB(H) is capable of withstanding the high loads generated during typical earth-moving and dozing tasks. An extension fitted to the top of the blade prevents soil from spilling over and accumulating on the vehicle.

**Key Features:**

1. Prepares defensive positions
2. Clears obstacles, urban road blocks and rubble
3. Fills anti-tank ditches
4. It is strong and light
5. Opens routes
6. Prepares the ground for launching bridges
The Self-Protection Combat Roller suitable for Heavy Tracked Vehicles is known as the SPCR(H).

It exerts high pressure onto the ground ahead of the tracks of the host vehicle to target pressure activated explosive devices in order. The SPCR(H) is designed for use on concrete, asphalt, gravel and hard dirt roads.

The product comprises two 4-wheel roller gangs to protect the vehicle tracks which stow neatly to minimise its impact on vehicle operation ability and mobility when not in use.

The rollers are able to steer left and right to provide coverage during cornering.

The heavy effect provided by the SPCR(H) is generated by a combination of the weight of the rollers and a self-contained hydraulic system.

**Key Features:**

1. Applies a load to the ground through rollers ahead of each of the vehicle tracks
2. It is designed to operate on concrete, asphalt, gravel and hard dirt roads
3. It is able to steer rollers left and right to provide a level of coverage while cornering
4. It can operate in float and push down modes to adjust roller ground contact force
5. It stows neatly when not in use
6. Minimal impact on vehicle mobility
Pearson Engineering is committed to ensuring that customers are fully supported with spares packages, training and through-life support for their equipment.

A dedicated team of through-life support specialists ensure that customers have everything they need at their disposal to effectively use the equipment and to fully maintain its operational capability.

Spares and Through-life Support

Field Support
Field Support Representatives provide 24/7 on call assistance, in field repair support, trials support, equipment installation support and New Equipment Training solutions.

Integrated Logistics Support
Pearson Engineering offers its customers a comprehensive range of ILS services that encompass the DEF STAN 00-60 methodology.

Repair and Overhaul
Pearson Engineering has the facilities and key skills required to provide a comprehensive equipment conversion, repair and overhaul service.

Design and Test
Pearson Engineering has a dedicated design office, prototype development and test facility and access to test and trial sites throughout the UK and U.S.
Facilities

Pearson Engineering Ltd’s facilities in Newcastle upon Tyne include the Armstrong Works on Scotswood Road and a design and prototyping facility on Wincomblee Road. These unrivalled facilities give us an immediate on-site dedicated machining, fabrication and assembly capability for the rapid prototyping and production of defence materiel.
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