



# VEHICLE PROTECTION & MOBILITY SOLUTIONS



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### MSW Auto Spare Parts

Occupant and asset protection and sustained mobility is our business and we accept no compromise.

MSW cooperates with leading UK based manufacturers for each of our specialist component lines and is dedicated to offering our clients only the finest possible products delivering superior performance, durability and occupant safety.

### Market Leader

MSW has supplied government security forces, militaries and private armoured and security vehicle manufacturers in the MENA region since 2004 and enjoys an unrivalled reputation for technical excellence and customer service.

### The Default Choice

Our specialist range of braking, fire suppression and military seating systems have steadily become the default choice for both new builds and vehicle refurbishments for many clients in the region as they can buy from MSW safe in the knowledge that they are sourcing the very best components available at any price.

### Unique Product Range

MSW offers a wide range of application specific components, often available for immediate dispatch from our huge locally held inventories. Be it for your discrete armoured vehicle, APC or other specialist vehicle, MSW has the solution.





# BRAKES

## Brake Upgrades

Standard OE brake components are prone to quickly overheating and failing after repeated braking events in armoured vehicles.

For lighter vehicles and lower speed usage situations an upgraded brake pad and rotor may suffice but for heavier and extreme duty vehicles a complete brake system replacement will be required.

MSW offers a complete range of brake upgrade solutions developed in cooperation with industry leaders Alcon Specialist Brakes & Clutches and EBC Brakes to suit every possible usage scenario for almost every vehicle platform.



**EBC  
BRAKES**

For lighter armoured applications MSW in cooperation with EBC Brakes has developed a range of advanced high friction brake pads, brake discs and uprated brake fluids which offer tangible improvements in brake performance whilst retaining the OE calipers.

The MSW stainless pads are ideally suited to light-weight armoured vehicles that are occasionally used at higher than normal speeds. Friction levels are higher than OE pads providing stronger braking force.



Our best selling BlueStuff pads offer even higher friction properties than the YellowStuff formula and are recommended for heavier vehicles or when higher speed driving is the norm.

**alcon**  
specialist brakes & clutches

**EBC  
BRAKES**



EBC rotors are manufactured exclusively from high grade G3000 specification cast iron and feature unique slotting and dimpling designs to cool and clean the pad/rotor contact area. Ideally suited to heavy duty armoured applications in all conditions.

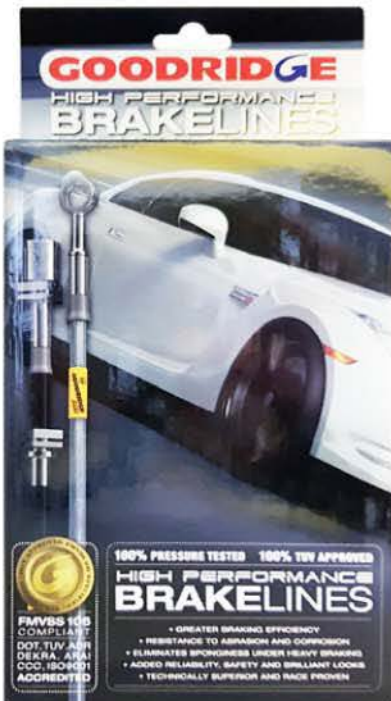
Upgraded brake pads and rotors will improve braking performance however the increased friction generated in stopping the vehicle faster in turn raises the temperature of the brake fluid in the system which can lead to brake fade after repeated high speed braking events.

MSW recommends upgrading both the flexible rubber hoses to steel braided items and replacing the OE brake fluid in the system to one of our high performance fluids.



BF307+ is a high performance DOT 4 fluid with a dry boiling point of 310°C (590°F) suitable for use in braking systems where extreme operating temperatures are expected.

DOT 5.1 is a high specification fluid offering with a dry boiling point of 269°C (516°F) which is higher than standard DOT 3 fluids.



Goodridge high performance stainless steel outerbraid brake lines deliver improved pedal feel and improved braking efficiency.



For heavier vehicles upgrading the pads, rotors, hoses and fluid may still not be sufficient to manage the extreme demands placed upon the braking system. For these situations MSW in cooperation with Alcon Specialist Brakes & Clutches has developed a range OF extreme duty brake kits which replace the entire OE brake system with larger and more thermally efficient rotors and pads and larger stiffer cast iron calipers featuring greater piston area and higher line pressures.

Alcon brake kits, manufactured exclusively from high grade materials in their UK manufacturing facility, offer unparalleled braking performance and a safer more stable vehicle in even the harshest operating conditions.

**Additional Benefits include:**

- Unbeatable braking performance
- Shortest stopping distances available
- Internal wiper seal caliper technology
- Zero 'brake fade' in hard or emergency use
- Reduced running costs over life of vehicle
- TUV tested and certified for LC200 model

**The wide range of Alcon kits includes the following popular armoured platforms:**

- Toyota LC70 Series
- Toyota LC200 / Lexus LX570
- Toyota LC300 / Lexus LX600
- Toyota Tundra
- Toyota Prado
- Toyota Hilux
- Ford F150/Raptor
- Ford F550
- AM General Humvee
- Chevrolet Suburban HD
- Cadillac Escalade



Ductile iron caliper housings provide maximum strength and stiffness as well as high resistance to blast impact and fatigue. Piston sizes are maximised to deliver the higher possible line pressures whilst retaining the OE actuation mechanism.

Larger front pads featuring Alcon's high performance friction material offer greater stopping power and elongated service life.



Larger rear pads featuring Alcon's high performance friction material offer greater stopping power and elongated service life.





Ductile iron caliper housings provide maximum strength and stiffness, as well as high resistance to blast impact and fatigue.



Larger diameter and thicker front & rear Alcon rotors manufactured from the highest grade iron offer increased brake torque, improved thermal efficiency and longer service life.



## FIRE SUPPRESSION

### Fire Suppression Systems

Vehicle fires cause catastrophic damage and can prove fatal to the occupants in an extremely short period of time.

Crew safety and continued mobility of the vehicle is reliant upon fires being quickly and efficiently extinguished.

Industry leaders Lifeline Fire and Safety have developed a specialist range of MSW Armoured systems to suit all vehicle platforms and types of use.

Engine compartment, crew compartment, fuel tank and tyre systems are available with fully automatic activation as required with a choice of either AFFF (water based foam), 3M Novec 1230 (liquified gas) or Purple K (dry chemical) extinguishing agents.

MSW offers lifetime after-sales service and support for all of our systems.

Additional product info may be found at <http://www.lifeline-fire.co.uk/defence/>



## VEHICLE UNDERBODY PROTECTION & HAND-HELD SYSTEMS

AFFF water based foam systems are available in a range of capacities to suit all applications and threat levels. 3M Novec based systems are also available.



Choice of activation switch types available.



Robust control box for all systems features military spec screw binder sockets for failsafe operation.

3M Novec filled Hand-held fire extinguishers in a range of capacities offer the ultimate fire knock-down capability. Available with optional military spec bracket. AFFF system are also available.



## ENGINE BAY AND CREW COMPARTMENT SYSTEMS



Optional Dual-zone control box features all-in-one test and system activation for both engine bay and crew compartments.

Novec remote pressure system (3.0Kg) with single high-discharge nozzle offers the ultimate protection for vehicle interiors. System is discharged in under 2 seconds, offering the highest fire knock-down capabilities of any system available. The 3M Novec extinguishing agent is both harmless to crew and eco-friendly.



Optional UV/IR sensor detects flames inside the crew compartment and automatically activates the fire suppression system before extreme heat build up can damage the vehicle.

Novec stored pressure system (2.25Kg) with single high discharge nozzle and protectowire automatic heat activation. A highly effective yet cost-effective solution ideally suited to engine bay protection. The system is compact and easy to install.





## MILITARY SEATING

### TEK Military Seating

ProTEK is a global market leader in military seating, renowned for the quality, robustness and cost effectiveness of its products. ProTEK seating offers defence customers the highest levels of safety and protection and continues to introduce new innovations, modularity and technologies to the military and armoured marketplace.

Core products include the range of ProTEK DC (Driver/Commander) and ProTEK Crew seats featuring specially designed and manufactured seat frames to which modules can be fitted, such as harness seat belts, head guards, stowage units and blast protection which have been designed for installation in both legacy and new build fleets.

Blast protection seats have been independently tested and conform to Stanag 4569 AEP 55 standards. Seat safety levels have been independently tested and conform to either M1 or M2 standards.

The ProTEK range also includes Gunner & Turret seats as well as ROPS systems and Stretcher modules.



ProTEK Driver and Commander seats feature the highest safety and protection systems, along with maximum functionality, and have been designed for use in most types of military vehicle from light wheeled to heavy tracked.



**ProTEK T4H SV**  
**Height Adjustable Blast Seat**  
 Optimised to 3Mps Drop Tested  
 STANAG 4569 AEP-55  
 4-point Retractable Harness  
 Lateral Headguard  
 Riser 100mm  
 Fore/Aft Slide Adjustment



**ProTEK DC Mesh Seat**  
 • Lightweight  
 4-point Retractable Harness  
 Fore/Aft Slide Adjustment

\*Range of riser and blast units available



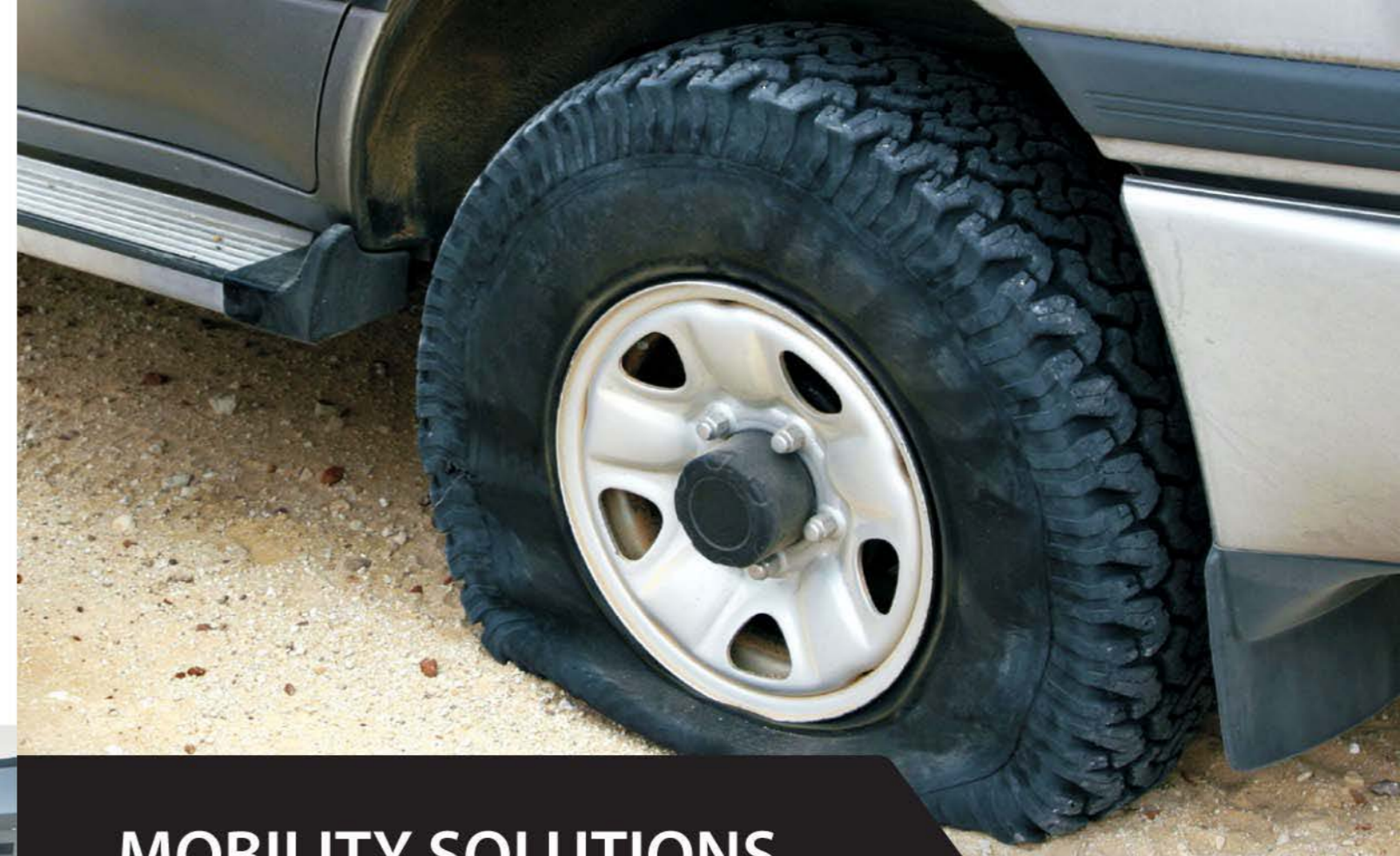
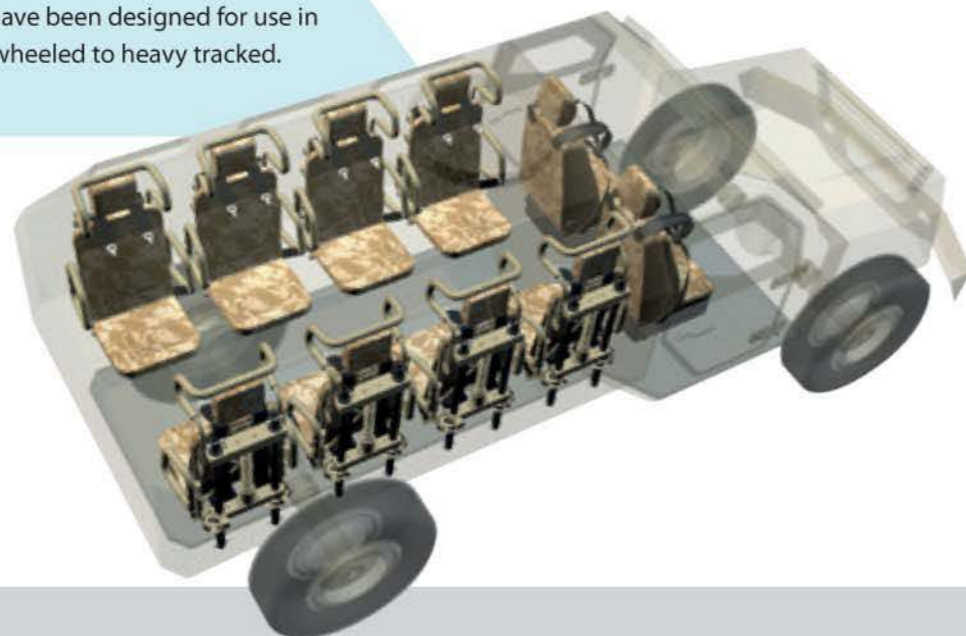
**ProTEK DC Full Blast**  
**Attenuating Seat**  
 > 5.5Mps Drop Tested  
 STANAG 4569 AEP-55  
 4-point Retractable Harness  
 Lateral Headguard  
 Fore/Aft Slide Adjustment



ProTEK Light SV Crew  
 >3 Mps Drop Tested  
 STANAG 4569 AEP-55  
 ProTek SV Foam to seat Base  
 4-point Static Harness  
 Lateral Headguard  
 Folding seat base



ProTEK Crew seats feature the highest safety and protection systems, along with maximum functionality, and have been designed for use in most types of military vehicle from light wheeled to heavy tracked.



## MOBILITY SOLUTIONS

### Wheels & Run-Flats

Vehicles working in theatres of conflict or on treacherous terrain must retain mobility even if one or more tyres is deflated due to ballistic attack or terrain-related damage.

MSW offers a full range of heavy-duty wheel rims, multi-segment low profile Runflat systems, retro-fit Tyre Pressure Monitoring Systems (TPMS) and high load rating tyres to ensure that your vehicle will not be sidelined by attack or roadside debris.

MSW Armoured 18" heavy-duty alloy wheel rims feature a discrete OE appearance and are backed by the security of TUV certification and a minimum load rating of 1,600 Kgs. Fitments for most popular armoured platforms (Toyota, GMC, Ford) are available.





## HEAVY DUTY WHEELS

MSW Armoured rims feature a reduced offset increasing the effective track and stability of your vehicle.

All MSW armoured wheels have been specifically designed and developed to accommodate Alcon brake systems without the need for wheel spacers.



MSW Armoured 18" heavy-duty alloy wheel rims for most popular armoured platforms, featuring a discreet OE appearance and backed by the security of TUV certification and a minimum load rating of 1,750 Kg



MSW Armoured 17" heavy-duty armoured alloy wheel rim, featuring a classic steel wheel design, with a minimum load rating of 1,750 Kg



## WHEELS & RUN-FLATS

MSW Armoured 18" heavy-duty alloy wheel rims for most popular armoured platforms featuring a discreet OE appearance and backed by the security of TUV certification and a minimum load rating of 1,750 Kgs



Multi-segment dynamic runflats available in a range of sizes from industry leaders Runflat International

MSW Armoured rims feature a reduced offset increasing the effective track and stability of your vehicle.

All MSW armoured wheels have been specifically designed and developed to accommodate Alcon brake systems without the need for wheel spacers.





[sales@mswarmoured.com](mailto:sales@mswarmoured.com)  
[www.mswarmoured.com](http://www.mswarmoured.com)

 [mswarmoured](https://www.facebook.com/mswarmoured)

