

TOYOTA 76

ARMoured LANDCRUISER STATIONWAGON

JANKEL



TOYOTA 76 DISCREETLY ARMoured LANDCRUISER

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Discreet Armouring Concept

The Toyota LandCruiser is the base vehicle of choice for many humanitarian and security organisations worldwide. Renowned for its robust reliability and extensive spares support network, the Toyota LandCruiser has been used in the most remote and hostile areas of the world for many years.

The Jankel Armoured Toyota 76 LandCruiser builds on this capable and rugged vehicle platform.

The user requirement which the armoured Toyota 76 LandCruiser may fulfil is as follows:

- Humanitarian patrol in hostile environments
- VIP Escort with electronic counter-measures
- Covert operations / reactive intervention

The Jankel Armoured Toyota 76 offers the following key benefits:

- Based on the rugged and reliable heavy-duty Toyota LandCruiser vehicle, with logistics support available in many theatres worldwide enabling ease of deployment and servicing
- QinetiQ independently approved armour specification to BRV 1999 VR6 (B6) that meets the protection requirements of the UK Home Office for blast and ballistic threats
- A discreet low profile appearance which blends into many urban traffic flows
- Fuel capacity, payload and specification to enable a wide range of user missions over varied terrain of up to 1,000 km with 5 crew
- Simple vehicle mechanics with no complex engine management or diagnostics systems





LX

TOYOTA 4WD

BFGoodrich

All-Terrain T/A

TOYOTA 76 SPECIFICATION

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Base Vehicle

A standard Toyota LandCruiser is selected as the base platform for the armoured vehicle with the following features:

- 1HZ 4.2 L Straight-6 Diesel Engine (129 bhp)
- Hi-Lo transfer box with part-time 4WD
- Rest of world Extreme Environment specification
- Powerful air-conditioning system
- Snorkel and cyclonic air-filter
- White paint with grey or oak trim
- Rear limited slip differential enhancing off-road capability
- Wading depth of 700 mm without preparation
- 90 Litre fuel tank

Specifications of Enhanced Vehicle

Dimensions	<i>Length 4,730 mm</i>	<i>Width 1,770 mm</i>	<i>Height 1,955 mm</i>
Weights	<i>GVW 4,350 kg</i>	<i>Unladen 3,400 kg</i>	<i>Payload 950 kg</i>
Driving	<i>Fuel Capacity 145 litres</i>	<i>Range 750 km</i>	<i>Top Speed 145 kph</i>
Capability	<i>Clearance 230 mm</i>	<i>Incline angle 41°</i>	<i>Side angle 41°</i>





All-Terrain

TOYOTA 76 OCCUPANT PROTECTION

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Protection

Jankel have over 30 years experience in building armoured vehicles for government, military and humanitarian customers and has built up an impressive client list who are extremely demanding in relation to the safety and armour installation standards they expect from their protected vehicles.

The vehicle's armour design has been subject to, and passed, the stringent independent QinetiQ approval process. This approval process covers every aspect of the design, from material selection, testing, material traceability and welding standards to how the armour system would perform against ballistic, fragmentation and blast threats.

Ballistic Protection Level

The materials used provide protection to BS EN 1063 Level BR6 / BS EN 1522 Level FB6 which equates to the following threat:

Calibre 7.62 x 51 mm NATO Ball, 9.5 gram @ 10 metres, 3 shots into 120 mm circle, velocity 830 mps +/- 10 mps and all lesser threats (including AK47 assault rifle soft core ammunition).

Side Blast Protection

The level of protection offered by the vehicle is 15 kg of TNT detonated 3 metres from the vehicle.

Underfloor Protection Level

The level of protection offered by the vehicle is 2 x DM61 hand grenades, detonated simultaneously beneath the vehicle.

This level of protection also applies to the fuel tank, which is fabricated from steel armour.

Material Selection

Jankel extensively use steel armour which offers the highest levels of armour integrity against multi-strike and side blast events. Light weight composite materials are available to upgrade protection specification.





Established by Arctic Light 1990, Trucking Co. 01/10/10
A company specializing in Arctic Light & associated items of various sizes
and quantities.

TOYOTA 76 AUTOMOTIVE UPGRADES

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Base Vehicle

Whilst the rugged and reliable base vehicle serves as an outstanding platform for armouring, certain upgrades must be applied in order to produce a safe vehicle capable of efficiently carrying the permanent addition of armour.

Engineering Upgrades

The upgrades undertaken to enable the vehicle to operate effectively and reliably with it's post-armour enhanced GVW are as follows:

- Turbo-charger installed onto diesel engine to increase power to 168 bhp @ 3,800 rpm and 380 Nm @ 2,200 rpm
- Replacement 145 litre armoured fuel tank
- BF Goodrich All Terrain T/A LT235/85 R16 Tyre and heavy duty Toyota steel wheels to improve stability of vehicle, further fitted with a 50 km Hutchinson runflat system
- Heavy duty door hinges, door check straps and door risers to maintain integrity of door closing function
- Bespoke heavy-duty springs, dampers, steering damper and anti-roll bars, both to cater for additional weight of armour, as well as improving handling and stability
- High performance braking system to improve efficiency and reduce brake fade





TOYOTA 76 SECURITY UPGRADES

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Protection Design

A QinetiQ approved armour system is installed in the vehicle with the following features:

- Full Overlap and Spall Splash Returns in all door and window apertures
- Fully armoured rear doors, with no internal partition
- Multi-laminate polycarbonate ballistic glazings (transparent armour)
- Opening armoured windows optionally available
- Enhanced roof protection (NATO Level B6 Armour Protection @ 60°)
- Fully armoured fuel tank

Additional Security Equipment

The vehicle is equipped as standard with a number of additional systems to enhance the safety, security and capability of the vehicles:

- 50 km Hutchinson runflat system (x 5)
- Dual Optima gel battery system with split charge / auto voltage relay
- Anti exhaust insert modification
- Underbonnet fire extinguisher system with dash control
- Deadbolts to all doors (5)
- Internal / External Intercom
- Siren / Public Address System
- Wiring for future fit of communication systems
- Seat belts to all seating positions, including cargo area
- Toolkit, First Aid Kit and Warning Triangle
- End user handbook





TOYOTA 76 QUALITY IN BUILD AND DESIGN

Quality Assured

Over 30 armoured vehicles are leaving the production line every month, built through a process driven and quality focused system to ensure conformity of production as you would expect of any volume vehicle manufacturer.

Every stage of the production process is tracked and recorded, quality control is integral at each process stage with 8 quality gates along the production line.

All welders and armour welding is certified according to internationally recognised standards including welding procedure specification EN ISO 15609 and welding procedure qualification EN 15614.

All material batch numbers are recorded according to the vehicle and the position. With the modern culture of litigation, procurement teams and manufacturers have to be prepared to provide a procurement and armour audit trail. This audit trail is essential to prove that the best possible protected vehicles were purchased within the budgeted funds available.

A thorough vehicle check is undertaken in a purpose built pre-delivery inspection building that is equipped with brake, suspension and engine testing equipment. Finally the factory includes an off-road terrain area for a practical shakedown of each completed vehicle prior to delivery.





TOYOTA 76 INTEGRATED LOGISTICS SUPPORT

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Logistics Support

The Toyota 76 benefits from being in extensive service worldwide, and retains simple electrical and mechanical systems and technology.

For this reason, much of the risk and cost associated with the lifecycle support of the 76 are greatly reduced.

The Toyota 76 is arguably the easiest and lowest cost vehicle of this type to support anywhere in the world, either in the users' country or on international operations.

The logistics support element of each contract is worked out in collaboration with the user requirements. Jankel takes into account user support capabilities, current vehicle support strategy and future objectives for lifecycle costs and vehicle availability.

Aspects of a support proposal would include:

- Forming a relationship with a local Toyota service partner to develop parts supply, service, maintenance, warranty and general repair functions to the users
- Provision to the users and service partner of full documentation on the base vehicle system to include workshop manuals, illustrated spare parts catalogues, end user manuals and revised maintenance and check schedules
- Provision of spare parts scaling packages for stocking, ongoing in-country use, international deployments, etc.
- Delivery of maintainer, user familiarisation and refresher training





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