

This press pack accompanied the launch of the Avensis Verso in June 2001. The model underwent some changes during its time on sale, which can be tracked using the Timeline feature on the Avensis Verso archive web page. Additional assets and information about Avensis Verso can be obtained from the Toyota press office.

AVENSIS VERSO A DYNAMIC NEW CONTENDER FOR THE MPV MARKET

KEY POINTS

- Sleek and stylish addition to Upper Medium MPV market
- All-new platform provides spacious interior with passenger car driving performance
- Seven seat capacity with full luggage space
- Unprecedented levels of Toyota quality and durability
- Lowest overall height in the MPV sector at 1,675mm
- Longest interior load area in its class at 2,104mm
- Maximum luggage area of 2,422 litres with both rows of rear seats removed
- Turn-by-turn satellite navigation fitted as standard to GLS model
- The only car in its class to offer rear air conditioning as standard (GLS)
- Choice of 2.0-litre VVT-i petrol or 2.0-litre D-4D common rail diesel engines
- 2.0-litre VVT-i available with optional automatic gearbox for £1,000
- Anti-lock braking with EBD (Electronic Brakeforce Distribution) and Brake Assist fitted as standard
- Excellent combined fuel consumption of 43.5mpg (2.0-litre D-4D), 32.8mpg (2.0-litre VVT-i)
- 2.0-litre VVT-i offers class leading performance with 0-62mph in 11.4 seconds and 119mph top speed (where permitted)
- On sale in the UK from 1 August 2001
- Priced from £17,795 on the road (GS manual)
- Double locking and Thatcham Category One alarm/immobiliser fitted as standard

- Offered with full three year/ 60,000 mile warranty, three year paintwork and 12 year anti-perforation warranty

SHORT STORY

The Avensis Verso is a stylish and dynamic new contender in the mainstream, family MPV market. Based on an all-new platform, the Avensis Verso combines the interior space and luggage capacity of a much larger vehicle with the driving, handling and dynamics of a family saloon. Designed to offer versatile and comfortable seating for seven people, Avensis Verso also offers class leading performance and driving enjoyment.

Avensis Verso is an MPV for customers who want spacious interior and good looks; flexible seating and prestige; high performance and low fuel consumption. In short, Avensis Verso is an MPV that drives and feels like an executive passenger car.

Avensis Verso will be on sale from 1 August and will be available as two models, GS and GLS. Standard equipment on the GS features ABS with Electronic Brakeforce Distribution and Brake Assist, air conditioning, remote alarm with immobiliser and double locking, radio with single CD player and seven seats.

The higher specification GLS model adds 16" alloy wheels, roof rails, turn-by-turn satellite navigation, rear air conditioning, front fog lamps and leather steering wheel and gear knob.

Advanced Technology

The Avensis Verso benefits from Toyota's advanced technology and intelligent design engineering. It is light but strong, agile but stable with class leading standards of active and passive safety.

In terms of the environment the Avensis Verso uses 20 per cent less lead content in its construction than an equivalent vehicle produced five years ago.

Avensis Verso is available with a choice of two advanced engines - either a 2.0-litre VVT-i (Variable Valve Timing – intelligent) petrol or the latest 2.0-litre, common rail D-4D turbo diesel. Both offer high performance and low fuel consumption.

The 2.0-litre VVT-i petrol engine delivers maximum power of 147bhp at 6,000rpm and maximum torque of 192Nm at 4,000rpm. It will take the Avensis Verso to a maximum speed of 119mph (M/T) 112mph (A/T) where permitted and will accelerate the car to 62mph from rest in 11.4 (M/T), 12.1(A/T) seconds.

The diesel-engined Avensis Verso is also class leading and even more economical – at a remarkable 43.5mpg on the combined cycle. The D-4D engine, developing 114bhp (85kW) at 4,000rpm and 250Nm of torque across 1,800rpm to 3,000rpm gives the car a top speed of 112mph and 0-62mph acceleration of 12.5 seconds.

The use of Toyota intelligent technology in design and manufacturing has brought kerb weights down to the lowest in the class (around 1,500kg, depending on model), without compromising safety.

Avensis Verso offers outstanding braking performance with the shortest stopping distances of any MPV on the internal *ams (auto motor und sport)* test – thanks to powerful discs all round; anti-lock with Electronic Brakeforce Distribution (EBD) as standard; and Brake Assist (BA).

Versatile Seating

The dynamic looks of the Avensis Verso reflect a car that is both people carrier and prestige estate. Avensis Verso has the lowest overall height in the mainstream MPV segment (1,675mm) yet still offers a very spacious interior, thanks to a low floor height and long wheelbase (2,825mm).

The overall length of Avensis Verso (at 4,650mm) and width (1,760mm) contribute to a stable and comfortable ride with a low centre of gravity. The interior length (3,205mm) is the longest in the class, with ample space for all three rows of seats and passenger luggage.

Seats in the second row slide and like the third row can be folded, tumbled or removed entirely to create additional load carrying capacity while front seats recline and slide. Second and third row seats can act as tables for family leisure – or to place books and games to help pass those long, dull journeys.

Avensis Verso was designed from the outset to offer enough luggage space for all of its passengers. It has a unique underfloor storage area in the boot, which offers additional space and security, taking luggage capacity to 282 litres with all three rows of seats installed. With second and third row seats removed, Avensis Verso has a huge 2,422 litres of luggage volume available (measured to the roof).

Class Leading Safety

Avensis Verso will build on the already excellent record of Toyota Previa in leading the class for active and passive safety. A four-star NCAP rating is the target.

Driver and passenger SRS airbag systems are standard equipment and three point belts are fitted in all three seat rows with all seven headrests being adjustable. ISO Fix anchorage points are fitted to the outer seats of the second row.

Front seats feature a passive Whiplash Injury Lessening system which will reduce the chances of neck injury during low speed, rear-end collisions.

Quiet and Comfortable

Avensis Verso offers outstanding ride comfort and low noise levels – to match and beat many executive passenger cars. A new suspension system has been developed featuring independent MacPherson front struts and a compact, torsion beam rear. Suspension components have been tuned over thousands of miles of European testing to suit local customer demands.

New Quality Standards

Avensis Verso is a premium quality car to match and exceed the increasingly high standards demanded by European customers.

The interior is finished in soft-touch materials for comfort and durability with dark metallic inserts to the centre console and ventilation surround trim and chrome finish to the interior door handles. The premium quality feel is reinforced by the attention to detail and fit and finish of all components.

1. BRINGING NEW BUYERS TO TOYOTA

- Competing in the Upper Medium MPV segment
- Adding to the Verso sub-brand
- Avensis Verso in the Retail and Fleet markets
- Attracting new customers to Toyota
- For families with active lifestyles

The Avensis Verso is a full sized MPV which is designed to compete at the heart of the mainstream 'people carrier' segment. This is one of the most dynamic and competitive markets in Europe with high profile contenders from all the major domestic car makers.

Analysts predict the total market for MPV sales in Europe will mature at around 1.45 million units this year. Much of the growth in recent years has been driven by compact and mini MPVs but the core segment of full sized MPVs still accounts for around 300,000 units a year.

The launch of the Avensis Verso will give Toyota two distinct models in the core MPV market. The new Toyota Previa is a highly successful large MPV, offering huge interior space and ample load carrying capacity. The Avensis Verso possesses more car-like qualities and will offer passenger car driving dynamics with space for seven adults and luggage in comfort.

The Verso Sub-Brand

The Avensis Verso is the second Toyota model to receive 'the Verso treatment'. It joins the Yaris Verso in a new sub-brand, which will be at the forefront of Toyota's development in Europe.

Yaris Verso has helped redefine the mini-MPV segment, it has introduced the world to the Verso concept – a label which will come to symbolise spacious, versatile, practical and innovative family transport.

As the sub-brand is further developed in time to come, alongside the Previa, Toyota will offer the widest range of MPVs in the market. Niche models designed to attract specific market sectors and customers will be introduced in the future under the Verso label.

Target Market - Retail

Current MPV buyers enjoy the space and versatility of their cars – but they yearn for a car such as the Avensis Verso with improved design, better quality and better driving dynamics. At the same time estate car drivers enjoy better design and performance, but wish for more roominess and versatility.

Around 300,000 European customers move between MPVs and large family estate cars every year. Toyota plans for the Avensis Verso to compete directly in the core MPV market plus, with its passenger car quality, to capture a significant percentage of the segment movers. Because these will be conquest sales, the success of Avensis Verso is seen as a key factor in growing Toyota sales in Europe to 800,000 units (or five per cent market share) by 2005.

Avensis Verso retail sales are predicted at 1,200 units in 2001 and 2,000 units in its first full sales year 2002.

UK Market

	1998	1999	2000	2001 YTD
MPV	50,545	56,509	79,223	37,126
Upper Medium Estate	71,739	66,173	62,933	20,035

Target Market - Fleet

Fleet sales for Avensis Verso are expected to reach around 500 by the end of 2001 increasing to 1,000 in 2002. Buyers will range from single one-off purchases for small businesses in the sub-100 sector to larger fleets operated by major companies.

The Avensis Verso will be targeted at both the MPV market place and the Upper medium estate market. Significant changes have occurred within these two respective markets as the MPV sector has increased in market penetration at the expense of the upper medium sector Estate.

Avensis Verso offers a strong proposition to fleet buyers within the MPV sector primarily from a cost of ownership perspective (refer to table overleaf) but it also offers the practicality and versatility of an MPV yet with a driving experience similar to an executive Estate vehicle.

Practicality and Versatility for Fleets

Toyota's all-new people carrier Avensis Verso joins Toyota's best selling fleet model Avensis on sale 1 July 2001. Avensis Verso will offer the same high levels of refinement, performance and economy as Avensis to the fleet car market with the driving, handling and dynamics of a family saloon.

Based on an all-new platform, the Avensis Verso combines interior space and luggage capacity of a mid-size MPV and will undoubtedly appeal to fleet buyers opting for the MPV as an alternative to the traditionally accepted estate.

Lower Emissions Means Lower Company Car Taxation

Fleet operators running vehicles in the upper medium sector now require not only good all round performance and money-saving whole life costs but also lower emissions from their vehicles. The fleet manager is increasingly under pressure to run greener fleets with company car tax now based on emissions.

As Government calls for these companies to be more environmentally responsible fleet managers can be reassured that the Avensis Verso offers better performance than comparable vehicles with the same engine size; uses less fuel and emits less carbon dioxide, less nitrous oxides and less hydrocarbons.

The 2.0-litre D-4D diesel boasts just 173 g/km, which compares against the proposed sliding scale at 19% for the new company car taxation effective from April 2002. The 2.0-litre VVT-i petrol emits 202 g/km, which would equate to 22% taxation while the automatic petrol is still only 213 g/km at 24% taxation.

A Truly Competitive Fleet Vehicle

Unique features fitted as standard on the GLS model set the Avensis Verso apart from its competitors with satellite navigation, 16" alloy wheels, front fog lamps and the only vehicle in its class to offer rear air conditioning.

Like its sister vehicle, Avensis Verso features an impressive range of intelligent technologies as standard such as Vehicle Stability Control, ABS with Electronic Brake Force Distribution and Brake Assist ensuring the all-important fleet operator knows the Avensis Verso offers an excellent safety package.

Since introduction in January 1998 the Toyota Avensis has proved a highly desirable contender in the competitive UK upper medium segment, accounting for over 60,000 sales. It provided Toyota with its first truly competitive fleet car and has become a very successful product in that sector. Avensis Verso will strengthen the extensive Toyota range available to the fleet market with an excellent proposition for the MPV/Estate niche sector.

The GS is likely to be the best selling model, particularly with fleets with air conditioning and ABS with EBD and Brake Assist as standard. Avensis Verso offers more standard equipment than its key competitors; the GLS will be a popular trade-up for executive estate buyers drawn to its standard satellite navigation, 16" alloy wheels and the only vehicle in its class to offer rear air conditioning.

National Preferences

MPV sales in Europe are concentrated in five main markets with Germany accounting for over one-third of all sales. These five main markets – Germany, France, Italy, the United Kingdom and Spain – account for around 80 per cent of all MPV sales.

Engine Types

The MPV market in Europe is increasingly focussed around diesel engines particularly since the development of new diesel technology, such as direct injection and common rail. In 1999 around 57 per cent of all core MPVs sold were diesel and this is expected to grow to 60 per cent of the market in the next couple of years

Avensis Verso, with its class leading D-4D common rail diesel engine, is expected to follow this pattern but the strong driving dynamics are also expected to capture a slightly larger number of petrol engined customers. Around 55 per cent of the sales mix in Europe is projected to be diesel.

Types of Customer

Most MPV buyers own more than one car – though the MPV remains the primary car in the household and plays an important role in setting image. Style is an important factor in choice and cars tend to reflect the buyer's social status.

Avensis Verso customers will largely be progressive families with one or two children of school age. They will enjoy an active lifestyle and balance their lives between work, leisure and family. These customers will be looking for a vehicle that combines the versatility of an MPV with the driving dynamics of a passenger car. They will appreciate its style and its quality. They will enjoy its performance.

2. A NEW STYLE OF MPV

The launch of Avensis Verso brings fresh choice to the market, adding style and innovation to the core MPV segment. It offers customers a high quality, dynamic alternative to mainstream MPV models from other volume European car makers.

Conceived initially in Europe – at Toyota’s advanced ED2 design centre in the South of France – Avensis Verso has been developed to sell on the world market. It is a vehicle which challenges the current pre-conceptions of the core MPV market, blending style, prestige and quality with versatility and load carrying capacity.

More than anything, Avensis Verso is a family car that will offer outstanding performance, driving enjoyment and passenger comfort.

A Sleek New Shape

The radical new shape of Avensis Verso is designed to lead the market in terms of styling, quality and prestige. The monoform body with long wheelbase and short overhangs creates an instant impression of interior space while the low overall height eliminates the ‘top heavy’ van-based look of many rival MPVs.

Initial impressions are confirmed by the physical dimensions. The Avensis Verso is 4,650mm long and 1,760mm wide – typical for cars in this sector. But at 1,675mm high it is 50mm lower than its main rivals creating that unique blend between MPV and executive passenger car.

A stretched wheelbase of 2,825mm, gives ample space for all three rows of passengers and their luggage. Indeed, Avensis Verso has the longest cabin length (3,205mm) in the class and, with all three rows of seats in position, measures 2,400mm from the front hip point to the back door trim.

Passengers are not squeezed for shoulder width either and three adults can sit across the second row in comfort. Interior width is 1,505mm, with shoulder width of 1,446mm, 1,456mm and 1,340mm in front, second and third row seats respectively. Headroom is equally spacious at 1,048mm, 1,012mm and 911mm respectively.

Clean, Aerodynamic Form

The overall bodystyling is clean and free of any unnecessary protruding trim. Front and rear bumpers are body coloured to retain the clean lines and enhance the quality image. Front and rear lamps project a clear family image, which is becoming the face of Toyota.

Emphasis on the aerodynamic shape of Avensis Verso has resulted in a drag coefficient of Cd 0.30 - the best in class. These superior aerodynamic qualities lead to improved fuel consumption, higher top speed and less wind noise.

The underbody of the Avensis Verso has been designed flat for smoother airflow beneath the vehicle and small spats ahead of the front wheels guide the flow of air around them, reducing drag. Attention to build quality has reduced the panel gaps at the bonnet and bumpers, and around the door pillars to reduce wind noise.

Finally the flush surface of the upper body contributes to the aerodynamic efficiency.

Underbody Space

Toyota designers even looked at the location of items such as the fuel tank and spare wheel in the quest for more space. The spare tyre has been moved forward to beneath the front seats and the fuel tank now sits ahead of the rear axle – both heavy items are inside the wheelbase. The rear silencer is moved forward to allow an additional deep luggage compartment beneath the boot floor.

Modular Seating

All seven seats in the Avensis Verso are finished high quality cloth trim that matches the fully trimmed door panels and colour co-ordinates with the deep-pile, quality carpet. Seat cushions are wide and deep, with seat backs firm for maximum back support and incorporating adjustable armrests for driver and front passenger.

Drivers of all shapes and sizes can be accommodated. The driver's seat slides through 240mm and has 44mm of height adjustment. The steering column is adjustable for tilt.

Second row seats can slide, fold, tumble or be removed altogether for maximum load carrying capacity. Seat backs contain tables with cupholders to create a practical and comfortable environment.

The centre seat in three seat configuration still offers ample space, and full safety features, for an adult passenger. Three-point seat belts and headrests are standard equipment. Second row seats slide up to 120mm and recline.

Third row seats can also fold, tumble or be removed and is the same width as the second row, once again offering ample space for adult passengers. They also recline for increased comfort and headroom. Seat backs are fitted with tables and cup holders.

Ample Luggage Space

Just as important to most MPV owners as the versatility of the seating is the car's ability to carry luggage. Many MPVs are compromised by the lack of cargo space when all seven seats are in position.

Once again, Avensis Verso innovates with a large underfloor storage space as well as plenty of room behind the rear seats. Cargo volume, with all three rows of seats fitted, is a class leading 282 litres (VDA method).

When not in use – or for extra security – the underfloor storage area, located in the boot, is fitted with a removable cover which creates a flat, strong boot floor.

Start to remove the seats and the spaciousness of Avensis Verso become apparent. With the second and third row of seats removed, luggage capacity is 1,013 litres. If loaded to the roof this become a huge 2,422 litres.

Easy Loading

Thanks to its low height, Avensis Verso features easy loading of even heavy items with the loading deck just 740mm from the ground. The rear door, fitted with a damper for smooth opening and closing, lifts high enough for an adult to stand in comfort under it – but is still easy to reach for shutting. The rear door opening measures 957mm high by 1188mm wide – ample for even the largest domestic objects.

3. SAFETY FOR ALL THE FAMILY

- Class leading safety targets
- Shortest emergency stop distances
- Strong, impact absorbing chassis
- Driver and front passenger SRS airbags standard
- Anti-lock brakes with EBD and brake assist
- ISO-FIX child seat attachments

Toyota has been a consistent worldwide leader in active and passive safety systems for passenger cars. The Avensis Verso will build on the established standards to create a safe, comfortable and strong vehicle for all the family.

Avensis Verso has been designed to achieve a class-leading four-star rating in the Euro NCAP safety tests, joining Toyota's excellent safety record.

Impact Absorbing Chassis

The key to Avensis Verso's outstanding safety features is its impact absorbing chassis. Designed using the very latest computer analysis, it is engineered to create a body structure that absorbs and disperses collision energy while minimising the deformation of the passenger cabin.

The Avensis Verso has already shown a high level of impact absorption in internal 40 mph offset deformable barrier (ODB) frontal collision tests and 40mph full lap frontal collision tests.

Energy absorption is achieved through the use of tailored steel for the front side members to create a crushable front structure with cross members to disperse collision energy. Door sills and the roof side members are reinforced to maintain cabin integrity while front pillars are strengthened to reduce tyre intrusion.

Crushable boxes are used for the bumper reinforcements to help absorb minor knocks and reduce repair costs. The pillars and roof inner rails have head impact protection structures to absorb energy and reduce head injury in the event of a collision.

An electronic fuel cut-off system is activated in the event of a serious impact. This stops the flow of high pressure fuel from the fuel tank, reducing the risk of spillage and fire.

Passive Restraint System

The Avensis Verso is equipped with a comprehensive airbag and seatbelt system to help protect the occupants in case of a collision.

Both driver and front seat passenger have SRS front airbags. The front SRS airbags are triggered by an intelligent, electronic sensor, which receives its signal from a satellite sensor. Only when both the electronic sensor and a failsafe mechanical sensor come on does the inflator operate and the airbag deploy.

Full, three-point seatbelts are standard in all seating positions (including centre, second row) and adjustable headrests are also standard on all seats. The driver and front seat passenger are equipped with pretensioned seatbelts with force limiters.

These act to reduce the pressure on the occupants' chest while restraining them firmly in the correct seating position.

Whiplash Reduction

The front seats are designed with a Whiplash Injury Lessening (WIL) concept which helps to reduce injury to the neck vertebra in the event of a rear-end collision. The WIL concept allows the angle of the head and torso to remain constant during a low speed rear impact by a progressive collapse of the seatback. At the same time, the rear of the head comes into firm contact with the headrest to help cushion the blow and offer further head and neck protection.

The outer seats of the second row are equipped with ISO-FIX Child Restraint System attachments for simple and effective installation of approved child seats. These ensure that child seats are firmly attached to the structure of the car and are less likely to become detached in the event of an accident.

Outstanding Brakes

Active safety protection on Avensis Verso begins with its class-leading dynamic qualities and relaxed, comfortable driving position. Driver fatigue is now recognised as one of the single most significant causes of accidents.

But, in the event of an emergency, Avensis Verso has more to offer – an outstanding braking system with the shortest stopping distances in the class; better than many executive saloons.

In internal *ams (auto motor und sport)* brake tests from 62mph to rest, the Avensis Verso stopped the clock at 39.2m with cold brakes and 40.2m with hot brakes. This is unmatched by any other core MPV currently on the market.

At the heart of the Avensis Verso braking system are large discs, front and rear. A dual link brake pedal ensures positive feedback and feel when braking while the large brake booster means maximum pressure when needed. An anti-lock braking system is standard but further braking control is provided by Electronic Brake Force Distribution (EBD). This controls the brake pressure, left to right and front to rear, to maintain just the right amount of pressure for stable braking.

Finally, in the event of a real emergency, Brake Assist comes into play. This reacts to the need for an emergency stop by applying the maximum safe braking pressure when the driver 'stands' on the brake pedal. Tests have shown that, although drivers think they are braking hard, they are often not applying the full pressure needed to bring a car to a safe, controlled stop.

4. OUTSTANDING PERFORMANCE FOR DRIVING PLEASURE

- Class leading petrol and diesel engines
- Outstanding performance with low fuel consumption
- Latest technology for reduced emissions
- Advanced automatic transmission option

Powertrain Overview

Buyers of Avensis Verso have a choice of two advanced technology engines – either a 2.0-litre VVT-i (Variable Valve Timing-intelligent) petrol or the latest 2.0-litre, common rail D-4D diesel. Both offer high performance, an outstanding driving experience and low fuel consumption – linked to low emission levels.

The 2.0-litre, VVT-i petrol engine delivers maximum power of 147bhp (110kW) at 6,000rpm and maximum torque of 192Nm at 4,000rpm. This class leading performance places the petrol-engined Avensis Verso ahead of turbocharged MPV models from rival carmakers and is comparable with estate cars. Yet, Avensis Verso offers better fuel consumption – 32.1mpg on the European combined cycle – than its rivals.

The diesel-engined Avensis Verso is even more economical – at a remarkable 43.5 mpg on the combined cycle. The D-4D common rail engine, developing 114bhp (85Kw) at 4,000rpm and 250Nm of torque across 1,800rpm to 3,000rpm.

Diesel engine power has been boosted by the use of a new, variable nozzle turbocharger, which also serves to increase low end torque. Advanced computer analysis was used to achieve higher housing rigidity and reduced engine noise transmission. This engine exceeds all European Step III emissions legislation.

The petrol-engined Avensis Verso is also available with an advanced Super ECT (Electronically Controlled Transmission) four-speed automatic gearbox. This offers rapid response and smooth gearshifts, with a control system designed to match individual driving style.

The VVT-i Engine (in detail)

The 2.0-litre petrol engine in Avensis Verso uses VVT-i technology for greater fuel efficiency, lower emissions and improved performance.

The engine, designated 1AZ-FE, is 1998cc, twin-cam, 16-valve unit that develops 147 bhp (110kW) at 6,000rpm and has a maximum torque of 192Nm at 4,000rpm. The adoption of the VVT-i technology ensures high torque is available across a wide engine speed range, helping create relaxed driving conditions and reduce fuel consumption.

The engine has been developed with lightweight moving parts to reduce inertia and has an aluminium die-cast block. The ribs of the block have been refined to create a more rigid structure and reduce vibration and noise.

An offset crankshaft design maximises the power transmission to the crankshaft. In traditional layouts, the centre of the piston head is directly above the centre of the crankshaft. Combustion forces initially push the piston head sideways so the piston shaft can begin to turn the crank. In the offset design, the initial combustion forces push the head directly downwards and a greater amount of energy is transferred to the crankshaft.

The engine is fitted with chain driven overhead camshafts to eliminate the need to replace camshaft drive belts and make a significant reduction in maintenance costs. Drive belts are auto-tensioned to make adjustment unnecessary and iridium type spark plugs are fitted for extended replacement intervals.

Toyota Direct Ignition

The Toyota Direct Ignition system improves the ignition timing accuracy, reduces high voltage loss and cuts maintenance by eliminating the need for a distributor.

The Direct Ignition system on the Avensis Verso provides four ignition coils, one for each spark plug. The coils are integrated with the spark plug cap to provide direct contact.

Ignition timing is controlled by the engine control unit which takes information from the crankshaft position, the camshaft position and various other relevant engine sensors.

Intake Manifold Design

The air intake manifold plays a key role in the efficiency of the engine. It is made of resin, in order to cut heat transfer from the cylinder head and reduce air intake temperatures. A resonator in the air intake chamber optimises intake pulsation and reduces intake noise.

Two catalytic converters, just downstream of the exhaust manifold, are compact but the use of thin-wall ceramic substrates ensures rapid warm-up and effective control of potentially harmful emissions.

Variable Valve Timing-intelligent

Intelligent Variable Valve Timing (VVT-i) varies the air intake valve open and close timing according to driving conditions and engine loading.

By varying the 'overlap' time between exhaust valve closing and intake valve opening, the engine characteristics can be changed to create optimum burn - resulting in more efficient use of fuel, cleaner exhaust emission and maximum torque output.

The Toyota developed system has the benefit of offering continuously variable (not stepped) valve timing and allows the engine management computer to specify the optimum timing for the full range of driving conditions. It means the valve overlap timing no longer has to be fixed in advance to suit a predetermined driving environment.

More complete combustion, at a higher combustion temperature, means less nitrous oxide emissions. An increase in valve overlap results in some recycling of unburnt fuel which reduces unburnt hydrocarbons and increases internal exhaust gas recirculation, reducing nitrogen oxides. Both conditions result in better fuel consumption.

The D-4D Diesel Engine (in detail)

The D-4D direct injection diesel engine in the Avensis Verso offers class leading performance along with the widest torque band in the market.

The 1CD-FTV engine is a 1995cc, four cylinder, turbocharged and intercooled unit which delivers 85kW (114bhp) of power at 4,000 rpm and maximum torque of 250Nm across the 1,800rpm to 3,000rpm rev range. Bore and stroke is 82.2 x 94.0mm.

A variable nozzle turbocharger has been installed to boost power output with low emissions and low fuel consumption. It also increases torque at low engine speeds by optimum positioning of 11 turbo vanes.

In order to achieve the power boost, the computerised engine control unit calculates the optimum turbo pressure from the engine operating conditions. It then opens or closes the variable nozzles to adjust the intake manifold pressure to the optimum value. Intake manifold pressure is measured by a pressure sensor.

The long term durability of the turbine housing is assured by the use of oxidation resistant cast iron. A semi-floating bearing for the slim turbine shaft helps reduce noise and vibration.

Low Emissions

The D-4D engine meets European Step III emissions legislation with potentially harmful gases and particulates reduced, thanks to the improved fuel consumption and more efficient combustion of the direct injection engine. Emissions of the main greenhouse gas, CO₂, are cut by around 20 per cent.

Twin catalytic converters help the Avensis Verso meet Step III emissions. One converter, just downstream of the exhaust manifold, uses thin-wall substrates for faster warm-up while a full sized two-litre oxidation catalyst beneath the floor cleans the warmed exhaust gases.

Common Rail Technology

Until recently, diesel engines relied on relatively simple technology with a low-pressure mechanical injector delivering fuel to a pre-combustion chamber in the cylinder head, where a single ignition - fired by the intense heat of high compression - takes place.

The system was reasonably fuel efficient but lacked precision and refinement, leading to vibration and noise. Fuel combustion can be incomplete, allowing smoke and other emissions to pass into the exhaust.

Toyota's common rail system makes use of a high pressure pump and intelligent, computer controlled injectors to deliver precisely the right amount of fuel, at precisely the right time, directly into the centre of the combustion chamber.

Fuel is stored at very high pressure, in a single reservoir - the common rail - before being fired into the cylinder. The high pressure injection creates better fuel atomisation for more power, cleaner burning and better fuel economy. The precise timing and measurement of fuel promotes better ignition, cleaner burning, better fuel economy and lower emissions.

In addition, the computer control allows a tiny amount of fuel into the combustion chamber a few microseconds before the main ignition - so-called pilot injection - to provide a degree of pilot burn. This smoothes out the shock of the main combustion to create less noise and harshness and deliver smoother power.

Combustion takes place directly on the piston head for maximum power and efficiency. Each of the four lightweight, aluminium alloy pistons is crowned with a combustion chamber, precisely shaped for optimum burn and fuel efficiency.

Transmission Choice

Petrol engined models can be fitted with either a five speed manual with latest type synchromesh and short throw gear lever or four speed automatic transmission.

The automatic transmission is a new generation automatic transaxle that displays advanced Toyota engineering and Super ECT (Electronically Controlled Transmission). Gearshifts are controlled by using a pistol grip lever on the dashboard.

Super ECT has achieved very fast response times and smooth gear shifts. It also delivers excellent fuel economy through the development of low friction engineering in the gear train and precise hydraulic pressure control.

The advanced electronic control allows the gearbox to 'learn' driving patterns and alter the gear shift timing to suit individual drivers – or their changing moods.

The new transaxle also features a transmission fluid warmer which decreases friction during cold start-up, further improving fuel consumption.

5. BUILT TO BE STRONG & SAFE

- Passenger car ride and handling
- Rigid, light body structure
- Lowest centre of gravity in its class
- European tuned suspension
- Class leading crash test target

Overview

The sleek, aerodynamic shape of Avensis Verso is built on a sound base – the strong and rigid chassis which gives the spacious MPV many of its passenger car qualities.

Avensis Verso sits square and stable on the road. Its combination of long wheelbase, low height and wide track ensures excellent ride and handling, leading to improved passenger comfort and driver enjoyment.

The Avensis Verso has the lowest centre of gravity in its class and good front to rear weight balance, with items such as the fuel tank and spare tyre moved inside the wheelbase. The reduced polar inertia leads to increased stability and more predictable handling, even at the limit.

Rigid, Light Structure

The Avensis Verso is the latest Toyota to benefit from the intelligent design philosophy of creating light, agile vehicles – used to such good effect in sports models such as the Celica and MR2 Roadster. Reducing weight, while retaining strength, improves performance, braking, fuel consumption and handling.

Avensis Verso, on the scales at 1,445kg has one of the lowest kerb weights in its class despite its high level of specification. The light weight has been achieved by intelligent design and by using thicker steel only for the body parts that need to be extra rigid.

Safety, however, has not been compromised and Avensis Verso is targeted to achieve a four star rating in the tough Euro NCAP crash tests.

Easy to Handle

Avensis Verso is designed to be light and easy to drive in all road conditions. Despite its size, it is easy to manoeuvre with a turning radius of just 5.5 metres – yet again among the best in the class.

The power steering is speed sensitive to ensure accurate feel on the open road, yet light in town and when parking. The steering column tilt adjusts to suit all driving styles and collapses in the event of an accident to absorb collision forces.

European-Tuned Suspension

Toyota's European engineering centre, based on the outskirts of Brussels, has been involved in the design of Avensis Verso from the outset, tuning the ride and handling to suit European customer demand. At same time the team has worked with engineers in Japan to improve intrinsic quality and reduce noise, vibration and harshness (NVH) to the lowest levels in the class.

Avensis Verso has a new suspension design engineered for excellent stability on the move with class leading ride comfort and low road noise.

Front Suspension

The front suspension uses a newly developed version of the familiar MacPherson strut with L-shaped lower arms for greater strength and stability. Shock absorber, springs and bushes have all been precisely tuned for maximum ride comfort, steering feel and low noise.

Wheel alignment is precise and the suspension geometry incorporates anti-dive. The front anti-roll bar is fitted with ball-joint mountings for extra precision and is attached to the struts which damps body roll without affecting steering feel.

Rear Suspension

The torsion beam rear suspension, with rear inclined dampers and separate springs, is compact and highly effective, contributing to excellent straight-line stability and cornering ability. Tuned spring and shock absorber rates contribute to the smooth ride while the strong trailing arm and rear anti-roll bar ensure stability on the move.

Newly developed shock absorbers, careful engineering of bushes and other measures have helped reduce road noise.

Wheels and Tyres

Avensis Verso has been developed with 15-inch wheels and tyres as standard on the GS model, with 16-inch alloy wheels fitted as standard on the GLS model. The standard tyre size is 205/65R15 with low profile 205/60R16 on the GLS.

The spare tyre is located beneath the front seat (and under the body) to create additional luggage space and improve the weight balance.

Chassis in Detail

The Avensis Verso chassis has been developed with four intelligent engineering principles in mind: high rigidity, impact absorbing structure, low NVH and maximum durability.

These included:

- Rear door opening rigidity increased by adding reinforcements to the pillar and increasing the thickness on the corners
- Reinforced rear pillar
- The wheel arches are reinforced for additional strength. Plates are added to the door sills and the rear body area rigidity is increased
- Strengthened front suspension towers are supported with additional spot welds. Lateral rigidity of the front suspension towers is extremely high
- Rear suspension attachment points are strengthened and have excellent vertical rigidity

Reduced NVH

Toyota engineers used the most sophisticated computer aided engineering technology to analyse every part of the body for stress points, vibration sources and noise.

Measures taken to enhance quietness include:

- The use of anti-vibration front sub-frame and strengthening of the attachment points of the front suspension arms
- High density dashboard sheet with inner silencers to increase sound insulation
- Double lipped weather strips, front to rear, along the beltline reduce wind noise
- Lips placed on the trailing edge of the front windows reduce wind noise
- Rigid front suspension towers reduce road noise transmission

- Rigid rear suspension attachment points
- Vibration control sheets in the wheel wells, asphalt sheets on the floor and general body soundproofing

Body Durability

A wide range of anti-corrosion measures will help the Avensis Verso fight rust and protect the body from minor chips and scratches.

Avensis Verso is backed by Toyota's pan European three-year paintwork and 12-year anti-perforation bodywork warranty.

Features include:

- Galvanised steel sheets are used for the body under panels, the under body and other exposed members
- Hinges and door edges are treated with anti-corrosion wax
- The leading edge of the bonnet, the door sills and the wheel arches are coated with anti-chip paint to resist chipping by flying gravel and small stones

6. QUALITY INTERIOR TO MATCH CUSTOMER EXPECTATIONS

- High quality, spacious interior
- Quiet, comfortable ride
- Soft touch controls
- Clear, modern instrumentation
- Fully equipped to executive levels
- Satellite navigation fitted as standard on GLS model

Nowhere is the new quality standard at Toyota more apparent than in the design and execution of the interior of Avensis Verso. Surfaces, switches and instruments have been re-engineered and optimised so it not only performs well, but actually feels and sounds good too.

Toyota customers, for so long used to some of the most reliable and robust cars in the world, will now benefit from more subtle, more tactile quality messages from Avensis Verso. In this way, Toyota will offer a winning combination of intrinsic and perceived quality.

The overall interior look is designed to make the most of the wide body, giving a feeling of extra room and comfort as well as high class fit and finish. The sweeping dashboard has a strong horizontal line and is finished in high quality, two-tone black and grey.

The ends of the dashboard sweep around to merge with close fitting panels on the doors, creating an apparently seamless, comfortable and spacious passenger area.

Quiet, Comfortable Ride

Once on the move, occupants will soon be aware of the effort that has gone into creating a smooth, quiet ride. Road and wind noise are minimal. Seats are firm and comfortable even for long journeys.

Toyota engineers used advanced computer techniques to analyse every stress point, every vibration and noise on the road, concentrating particularly on high frequency sounds. As a result, Avensis Verso is quieter than many top selling executive saloons.

Modern Driving Controls

Clear instrumentation, backlit for greater visibility at night, dominates the panel in front of the driver while other switches are laid out around the steering column in the conventional manner. The liquid crystal display trip adds a feeling of advanced technology.

For automatic gearbox models, the shift control is a 'pistol grip' lever mounted on the dashboard with a safety override button and overdrive control. The five speed manual gearbox is operated with a conventional shift between the front seats.

Soft Touch Buttons

The centre console houses the factory fitted six-speaker radio with single disc CD player, information display giving average fuel consumption and average speed and ancillary controls for heater and standard air conditioning. On the GLS model, the centre console also houses the standard turn-by-turn satellite navigation system. Control buttons are 'soft touch' with digital logic and add to the quality feel of the whole interior.

The heating and air conditioning equipment is designed to accurately circulate air throughout the body of the car with additional rear air conditioning fitted as standard on the GLS model.

Class Leading Storage Space

The Avensis Verso has a wide variety of storage spaces of different shapes and sizes for the convenience of a busy family. In keeping with the quality image, many of the storage spaces are finished in soft pile and covered with soft-touch, damped lids.

Despite the standard fit passenger airbag, Avensis Verso has a full sized 6.6 litre glove box in addition to an upper console box, a centre console box and a storage box for the driver.

Front seat passengers will also find a convenient shopping bag hook down to the side of the centre console with easy to use pockets in the doors for holding soft bottles and maps. Each row of seats have two cupholders and there is a concealed storage box beneath the ash tray.

Pricing and Market Competitor Comparison

Avensis Verso is available as two models with manual and automatic gearbox for the petrol engine and manual gearbox only for the diesel engine variant. Pricing is as follows:

Model	OTR Price
GS 2.0-litre VVT-i manual	£17,795
GS 2.0-litre VVT-i automatic	£18,795
GS 2.0-litre D-4D manual	£18,795
GLS 2.0-litre VVT-i manual	£19,795
GLS 2.0-litre VVT-i automatic	£20,795
GLS 2.0-litre D-4D manual	£20,795

Avensis Verso is available in the following eight colours with Kirkfell Grey cloth as the one interior trim available across the range:

Pure White	Non-Metallic
Silver Steel	Metallic
Merlot Red	Metallic
Island Green	Metallic
Carlo Blue	Metallic
Basalt Grey	Metallic
Orb Gold	Metallic
Teal Aqua	Metallic

Avensis Verso in the UK

The new Avensis Verso enters the UK market between the lower medium MPVs such as Scenic, Tino and Picasso and the larger Previa, Voyager and Galaxy family. In both pricing and specification it will provide an alternative to the entry level large MPVs from Ford and VW as well as the premium priced upper medium estate cars such as Mondeo, Passat and 406.

As is now the norm with new Toyota models, the Avensis Verso offers a very full standard specification at a competitive price, offering the customer good value for money.

The GS grade, likely to be the biggest seller, has an OTR price of £17,795. This includes CD, air conditioning, electric windows and mirrors, cargo area cover and front fogs. It costs less than the Honda Stream, Mitsubishi Space Wagon, VW Sharan and Ford Galaxy.

Take into account the specification difference – which means adding things from the option lists of the others to bring them up to the Avensis levels – the new Toyota offers up to an 8% saving, undercutting even the Mondeo, Passat and 406 estates, (see chart on following pages for full details).

The Avensis Verso GLS offers even higher standard specification and even better value for money. The GLS grade adds air conditioning in the rear 16" alloys and Toyota's highly praised satellite navigation system. The OTR price is £19,795 and when price/specification adjusted it offers savings of between 5% and 16% over the Sharan, Galaxy, Mondeo estate and 406 estate.

Toyota's previous offering in the mid-sized MPV market was the Picnic. Offered as both a six and seven seater (initially only as a six seater) the Picnic saw a fluctuating sales trend as the MPV segment became more diverse and customers, rightly, more demanding of increased flexibility thanks to the introduction of Scenic and Zafira. At its peak Picnic sold 2,700 units.

The forecast for Avensis Verso, bearing in mind that Toyota already offers the Yaris Verso and Previa to be joined next year by the new Corolla Verso, is 1,200 units in 2001 and 2,000 units in its first full sales year 2002.

TOYOTA AVENSIS VERSO 2.0-LITRE VVT-i GS VERSUS COMPETITORS

	TOYOTA AVENSIS VERSO 2.0 VVT-i GS	HONDA STREAM 2.0SE SPORT SS	MITSUBISHI SPACE WAGON 2.4GDI EQUIPPE	FORD MONDEO 2.0i GHIA	VW SHARAN 2.0S	VW PASSAT 1.8T 20V SE	VW PASSAT 2.0 SPORT	PEUGEOT 406 2.0 GTX FAMILY AC	FORD GALAXY LX2.3
	MPV	MPV	MPV	Estate	MPV	Estate	Estate	Estate	MPV
Maximum power kW	110	116	108	107	85	110	85	100	107
Maximum power HP	149	159.0	145	145	115	150	115	136	145
Includes in-dash CD	✓	£100	✓	✓	£100	✓	£100	£100	£100
Airbag location (Driver:passenger)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Central double locking	✓	✓	£20	✓	£20	✓	✓	✓	✓
Air conditioning	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anti-theft protection	✓	✓	£210	✓	£210	✓	✓	£210	£210
Immobiliser	✓	✓	✓	✓	✓	✓	✓	✓	✓
Seating capacity	7	7	7	5	7	5	5	7	7
Electric windows (F:R)	✓	✓	✓	✓	£200	✓	✓	✓	£200
Electric door mirrors	✓	✓	✓	✓	£40	✓	✓	✓	£40
Cargo area cover/rear parcel shelf	✓	✓	✓	✓	£80	✓	✓	✓	£100
Front fog lights	✓	✓	£50	✓	£150	£180	£180	✓	£50
On the road price	£17,795	£17,995	£18,995	£18,195	£18,395	£18,340	£17,575	£17,745	£18,245
Spec adjusted price increase	£0	£100	£280	£0	£800	£180	£280	£310	£700
New on the road price	£17,795	£18,095	£19,275	£18,195	£19,195	£18,520	£17,855	£18,055	£18,945
% diff +/- V Avensis Verso	0	2%	8%	2%	8%	4%	0%	1%	6%

All prices correct as at June 2001

TOYOTA AVENTIS VERSO 2.0-LITRE VVT-i GLS VERSUS COMPETITORS

	TOYOTA AVENTIS VERSO 2.0 VVT-i GLS	VW SHARAN 2.0 SE	FORD MONDEO 2.0i GHIA X	PEUGEOT 406 2.0 EXECUTIVE AC	FORD GALAXY ZETEC 2.3
	MPV	MPV	Estate	Estate	MPV
Maximum power kW	110	85	107	100	107
Maximum power HP	149	115	145	136	145
Includes in-dash CD	✓	£100	✓	£100	✓
Airbag location (Driver:passenger)	✓	✓	✓	✓	✓
Central double locking	✓	£20	✓	✓	✓
Air conditioning	✓	✓	✓	✓	✓
Rear air conditioning	✓	£880	£880	£880	£880
Anti-theft protection	✓	✓	✓	✓	£210
Immobiliser	✓	✓	✓	✓	✓
Seating capacity	7	7	5	5	7
Electric windows (F:R)	✓	✓	✓	✓	£200
Electric door mirrors	✓	✓	✓	✓	3
Cargo area cover/rear parcel shelf	✓	✓	✓	✓	£80
Front fog lights	✓	£45	✓	✓	✓
Leather steering wheel	✓	£40	✓	✓	£40
Satellite Navigation	✓	£1,200	£1,500	✓	£950
16" Alloy wheels	✓	£450	17"	£20	✓
On the road price	£19,795	£20,235	£20,395	£19,795	£19,745
Spec adjusted price increase	£0	£2,735	£2,380	£1,000	£2,360
New on the road price	£19,795	£22,970	£22,775	£20,795	£22,105
% diff +/- V Avensis Verso	0	16%	15%	5%	12%

All prices correct as at June 2001

TOYOTA AVENSIS VERSO EQUIPMENT LIST

SAFETY	GS	GLS
Driver & front passenger airbags	✓	✓
Passenger airbag detection function	✓	✓
Fuel cut safety system	✓	✓
ISO-Fix child seat fixings	✓	✓
Electrically adjustable and heated exterior mirrors	✓	✓
Anti-lock braking system with EBD and Brake Assist	✓	✓
Vehicle stability control	✓	✓
Speed sensitive power steering	✓	✓
Seven three-point seat-belts with ELR	✓	✓
Seat integrated front seat belt anchorage and support	✓	✓
Seat belt warning system	✓	✓
Upper interior head impact protection	✓	✓
Double wishbone suspension	✓	✓
Torsion beam rear suspension	✓	✓
Child proof locks on rear doors	✓	✓
Rigid high-tensile steel cabin cage	✓	✓
Pipe side impact door bars	✓	✓
INSTRUMENTS & CONTROLS	GS	GLS
Electric headlamp levelling	✓	✓
Four-Spoke leather trimmed steering wheel	x	✓
Digital odometer/trip meter	✓	✓
COMFORT & CONVENIENCE	GS	GLS
Speed sensitive power assisted steering (PAS)	✓	✓
Remote fuel flap release	✓	✓
Front and rear electric windows with one touch and anti-trap mechanism	✓	✓
Driver and front passenger vanity mirrors	✓	✓
AUDIO	GS	GLS
Six speaker RDS radio with one-touch tuning and presets	✓	✓
Single CD player	✓	✓
Six disc CD autochanger	Opt	Opt
Turn-by-Turn Satellite Navigation	x	✓
VENTILATION	GS	GLS
Front air conditioning	✓	✓
Air conditioning front and rear	x	✓
Pollen/clean air filter	✓	✓
SECURITY	GS	GLS
Remote alarm with microwave interior protection	✓	✓
Transponder key engine immobiliser	✓	✓
Double locking	✓	✓
Lockable glove box	✓	✓
Vehicle parts marking- major parts traceable to VIN	✓	✓
Security window etching- linked to 24hr helpline	✓	✓
Visible VIN	✓	✓
SEATING, UPHOLSTERY & TRIM	GS	GLS
Dark metallic effect trim	✓	✓
Leather trimmed gear knob and hand brake lever	x	✓

Chrome effect interior door handles	✓	✓
Front seat arm rests	✓	✓
Seven seat capacity	✓	✓
Individual detachable and foldable 2 nd and 3 rd row seats	✓	✓
Sliding 2 nd row rear seats	✓	✓
Reclining 2 nd and 3 rd row seats	✓	✓
Boot liner	Opt	Opt
Seat storage bag	Opt	Opt
BODY EXTERIOR	GS	GLS
Roof rails	x	✓
Red tone rear lamp cluster	✓	✓
Front fog lamps	Opt	✓
15" wheels with full hubcaps	✓	x
15" alloy wheels with locking wheelnuts	Opt	x
16" alloy wheels with locking wheelnuts	x	✓
Space saver spare wheel	✓	✓
STORAGE	GS	GLS
Drivers storage compartment	✓	✓
Dashboard storage boxes	✓	✓
Cupholders- front and rear	✓	✓
Bottle holders	✓	✓
Storage boxes for each row of seats	✓	✓

TOYOTA AVENSIS VERSO TECHNICAL SPECIFICATIONS

ENGINE 2.0			
Type	1AZ-FE		
Valve Mechanism	16 valve, DOHC, VVT-i, Chain-Drive		
Fuel System	Electronic Injection		
Displacement (cc)	1998		
Bore x Stroke (mm)	86 x 86		
Compression ratio	9.8:1		
Max. power (Kw) bhp/rpm	(110kW) 147 @ 6,000rpm		
Max. torque (Nm/rpm)	192 @ 4,000		
ENGINE 2.0 D-4D			
Type	1CD-FTV		
Valve Mechanism	16 valve, DOHC, Chain-Drive		
Fuel System	Direct Injection with common rail		
Displacement (cc)	1995		
Bore x Stroke (mm)	82.2 x 94.0		
Compression ratio	18.6:1		
Max. power (Kw) DIN bhp/rpm	(85kW) 114 @ 4,000rpm		
Max. torque (Nm/rpm)	250 Nm @ 1,800-3,000rpm		
PERFORMANCE	2.0 M/T	2.0 A/T	2.0D-4D M/T
0-62mph	11.4	12.1	12.5
Max.Speed (mph)	119	112	112
FUEL ECONOMY AND EMISSIONS			
Urban	24.6	23.5	34.9
Extra-Urban	41.5	38.7	50.4
Combined	32.8	31.7	43.5
CO ₂ (g/km)	202	213	173
WEIGHTS			
Kerb weight (kg)	1445-1535	1480-1570	1550-1645
Gross vehicle weight (kg)	2140	2175	2250
Towing capacity (u/braked)	500kg	500kg	500kg
Towing capacity (braked)	1500kg	1500kg	1500kg
GEARBOX RATIOS			
1 st	3.833	3.943	3.833
2 nd	2.045	2.197	2.045
3 rd	1.333	1.413	1.333
4 th	1.028	1.020	0.972
5 th	0.775	-	0.775
FINAL DRIVE			
	4.235	3.120	3.684
SUSPENSION			
Front	MacPherson strut		
Rear	Torsion Beam		
BRAKES			
Front	275mm Ventilated disc		
Rear	291mm Solid disc		
STEERING			
Type	Rack and pinion		

Ratio	16.27
Turns (lock to lock)	3.2
TYRES AND WHEELS	
Wheel size (GS)	15" steel (15" alloy optional)
Wheel size (GLS)	16" alloy
DIMENSIONS	
Overall length	4650mm
Overall width	1760mm
Overall height (GS)	1675mm
Overall height (GLS) (with roof rails)	1725mm
Load floor length	2104mm
Load floor width (max)	1280mm
Interior headroom-front seats	1048mm
Interior headroom-centre seats	1012mm
Interior headroom-rear seats	911mm
Wheelbase	2825mm
Front track	1505mm
Rear track	1500mm
Front overhang	860mm
Rear overhang	965mm
Coefficient of drag (Cd)	0.30
Fuel tank capacity (L)	60
Minimum turning radius (body)	5.9 metres
LUGGAGE CAPACITY (L)	
All seats in position	212
3 rd row of seats removed	701
2 nd and 3 rd row of seats removed	1013
2 nd and 3 rd row of seats removed – loaded to roof	2422
Additional under floor storage	70