

This press pack accompanied the UK launch of the third generation Toyota RAV4 in February 2006. Some changes were made to the model range during its time on sale, which can be tracked using the Timeline feature available on the third generation Toyota RAV4 archive web page. Additional assets and information relating to the RAV4 range may be obtained from the Toyota press office if required.

The New Toyota RAV4

KEY POINTS

- All-new RAV4, third generation of the world's most successful compact SUV
- Establishing new benchmarks for driving performance, quality, passenger comfort and equipment
- Rugged and modern five-door body
- Longer and wider than previous model, but easier to manoeuvre
- Class-leading aerodynamics for improved fuel efficiency
- Significant increase in interior space, including 47 per cent more luggage room
- Toyota Easy Flat folding rear seat system
- Active Torque Control 4WD system automatically transfers torque between front and rear wheels for optimum performance in all conditions
- First-in-segment Integrated Active Drive System (XT₄ grade and higher)
- Hill-start Assist Control (HAC) – standard on XT₄ grade and higher, plus Downhill Assist Control (DAC) on models with automatic transmission
- All-new suspension for improved ride and comfort
- Three engines – revised 2.0-litre VVT-i petrol and new-to-the-range 2.2-litre D-4D 140 and 180 diesels
- 175bhp (177 DIN hp) 2.2-litre D-4D 180 engine exclusive to flagship T180 model
- D-4D 180 most powerful engine in its class, with nought to 62mph in 9.3 seconds and 40.4mpg combined cycle fuel consumption
- Four trim levels – XT₃, XT₄, XT₅ and T180
- Alloy wheels, air conditioning, sound system with CD player and MP3/WMA compatibility, Easy Flat folding rear seat system and remote central double locking and alarm standard on all models

- Leather upholstery, glovebox cooler, sunroof and climate control standard on XT₄; full map colour satellite navigation, Bluetooth connectivity, Smart entry and Smart start system standard on XT₅; rear privacy glass, 18-inch alloys and wheelarch extensions standard on T180
- Nine airbags, including first-in-class driver's knee airbag, standard on all models
- Flagship T180 equipped with run-flat tyres and tyre pressure monitoring system, hence no tailgate-mounted spare wheel
- On sale in the UK from 6 February
- On-the-road prices from £18,995 (XT₃ 2.0 VVT-i)
- Insurance groups unchanged from previous generation, from 11E

SHORT STORY

The Toyota RAV4 was the inspiration for a new market segment for compact SUVs when it was launched in 1994 and it has proved an enduring success ever since. The original 'soft-roader' has recorded in excess of 1.8 million sales worldwide, more than 655,000 of these in Europe, where it has consistently been the market's best-selling 4x4 passenger vehicle.

The all-new, third generation RAV4 is an even stronger prospect and will set new benchmarks in the compact SUV segment with premium levels of driving performance, quality, passenger comfort and equipment.

New diesel engines that are cleaner, more powerful and more fuel efficient; new suspension for improved ride and handling; more advanced safety systems for occupant and pedestrian protection; a new, more versatile interior design; and fresh exterior styling that develops and refines the distinctive look of the previous model combine in a package that reinforces the RAV4's reputation for all-round excellence.

Designs on success

The RAV4 has been totally redesigned, taking into account modern customer expectations, while retaining the fun-to-drive quality that has been fundamental to its

lasting appeal. It's longer and wider than the previous model, providing more cabin space for passenger comfort and also a substantial – 47 per cent – increase in load area volume.

What's more, the interior is more flexible than ever before with the adoption of Toyota's Easy Flat system, which allows the rear seats (split 60:40) to be folded flat into the vehicle floor. A single lever action is all that's needed to do the job – headrests and the seat cushions can be left in place. Numerous handy storage spaces have been created throughout the vehicle, including a generously-sized underfloor compartment in the boot.

New era engines

Two of Toyota's new generation 2.2-litre D-4D common rail diesel engines are offered in the RAV4 for the first time.

The D-4D 180, with 175bhp (177 DIN hp) and nought to 62mph acceleration in 9.3 seconds, is the most powerful engine in its class, yet will return 40.4mpg in combined cycle driving. Notably fuel economy and emissions levels are better than for the previous generation RAV4's 2.0-litre D-4D engine.

The D-4D 180 will be available exclusively in the new RAV4 flagship model, the T180. The volume diesel power unit is the D-4D 140, delivering 134bhp (136 DIN hp), nought to 62mph in 10.5 seconds and 42.8mpg (combined).

Both engines have lightweight all-aluminium construction and benefit from engineering advances to achieve new low levels of noise and vibration. Low compression ratios and, in the D-4D 180, the use of piezoelectric fuel injectors, contribute to the excellent economy and low exhaust emissions. Toyota D-CAT (Diesel - Clean Advanced Technology) applied to the D-4D 180, including the unique DPNR four-way catalyst system, gives the engine world-leading combined nitrogen oxides (NOx) and particulate matter (PM) emissions.

The new RAV4 is also available with an improved 2.0-litre VVT-i petrol engine, revised to give 150bhp (152 DIN hp), nought to 62mph in 10.6 seconds (12 seconds automatic) and 32.8mpg in combined cycle driving (31.4 automatic).

Diesel models are equipped with Toyota's latest six-speed manual gearbox, a compact and lightweight unit designed for smooth and precise gear shifts. Petrol models are offered with the choice of five-speed manual or four-speed automatic transmissions.

Handling the rough and the smooth

One of the key elements in the ground-breaking appeal of the original RAV4 was its excellent on-road performance, with handling more like a sporting hatchback than a conventional 4x4. Through the years this quality has been continually refined and in the new generation RAV4 reaches a new level with the introduction of Active Torque Control four-wheel drive.

Active Torque Control four-wheel drive continuously monitors and controls the transfer of torque between the front and rear wheels to achieve the optimum grip and handling. The ratio can range from full front-wheel drive to a 55:45 front-to-rear balance. Instead of a conventional centre differential, the system uses a network of electronic sensors covering a wide range of performance data, including steering angle, vehicle speed, engine torque and throttle angle.

The RAV4 is also the first vehicle in its segment to offer Integrated Active Drive. This combines and coordinates the Active Torque Control 4WD, the Vehicle Stability Control Plus (VSC+) and Electric Power Steering (EPS) to help bring the vehicle under control if the onset of a skid or slide is detected. This provides much smoother and more effective intervention to help the driver keep control than in vehicles where the functions operate independently of each other.

Further aids newly available for safe progress include Hill-start Assist Control (HAC), which prevents the vehicle from slipping backwards when pulling away on an uphill gradient, and, on models with automatic transmission, Downhill Assist Control (DAC), which automatically applies braking pressure on steep descents without the wheels locking.

The RAV4 benefits from new suspension designs with MacPherson struts at the front and double wishbones at the rear. The new rear system is unique to the RAV4 and features diagonally-mounted shock absorbers positioned beneath the boot floor, causing less intrusion in the load space.

Advances in safety

The new RAV4 has been designed from the outset to achieve the highest, five-star ranking for occupant protection in Euro NCAP testing. More than that, it has also been subjected to Toyota's more stringent in-house simulations, which analyse crash performance at higher speeds.

The RAV4 has a new, impact-absorbing chassis, designed to minimise the degree of deformation in the event of an accident, by absorbing impact forces and channelling them away from the cabin.

The design also takes into account the risk to pedestrians, with energy absorbing elements and crumple zones around the front end of the vehicle, repositioning of the radiator and bonnet catch, and detail changes to the headlight brackets and wiper units.

Inside the vehicle, nine airbags are provided as standard, including a first-in-class driver's knee airbag, and a dual warning system with light and buzzer ensures both driver and front passenger buckle-up. The front seats feature the latest Whiplash Injury Lessening (WIL) design for improved support in a rear impact.

Equipped to please

The RAV4 is available in four grades: XT₃, XT₄, XT₅ and T180, the latter version powered exclusively by the D-4D 180 engine.

All models feature as standard driver and front passenger front and side airbags, curtain airbags and driver's knee airbag, ISOFIX rear child seat mounts, ABS with Electronic Brakeforce Distribution (EBD) and Brake Assist (BA). XT₄ grade models and above additionally feature Traction Control (TRC), Vehicle Stability Control Plus (VSC+), the Integrated Active Drive system, Hill-start Assist Control (HAC) and, if equipped with automatic transmission, Downhill Assist Control (DAC).

The XT₃ grade includes manual air conditioning, the Toyota Easy Flat folding rear seat system, slide and recline adjustment for the rear seats, Electric Power Steering, sound system with CD player and MP3/WMA compatibility, remote central double locking and alarm, Optitron instrument display, colour keyed electric heated door mirrors, 17-inch

alloy wheels with tailgate mounted hard cover for the spare, roof rails, body coloured bumpers, electric windows, driver's seat height adjustment and tilt and telescopic adjustment for the steering wheel.

The XT₄ specification includes an electric tilt/slide sunroof, dual zone climate control, front fog lamps, leather upholstery, retractable mirrors, glovebox cooler and remote audio controls on the steering wheel.

XT₅ versions come with full map satellite navigation, Bluetooth hands-free connectivity, keyless Smart Entry and Smart Start system, rain-sensing wipers, dusk-sensing headlamps, cruise control, heated front seats and electric multi-adjustment for the driver's seat.

The T180 rides on 18-inch alloys with run-flat tyres, so dispenses with the rear-mounted spare wheel. It also features a chrome finish to the front grille, wheel arch extensions, darkened rear privacy glass and smoked glass headlamps.

Prices and insurance

In spite of its big advances in performance and specifications, new RAV4 is priced only slightly higher model for model than the previous generation vehicle. For example, XT₃ and XT₄ versions rise by just £245, while the advanced, larger capacity D-4D 140 costs £300 more than the outgoing 2.0-litre D-4D.

A £1,045 rise in the price of the XT₅ model takes into account a significantly higher standard specification than before, including Bluetooth connectivity.

Insurance groups for the XT₃, XT₄ and XT₅ models are unchanged from the previous RAV4, despite performance improvements, and the new T180 has been given a group 13E rating. All models have earned the ABI's 'E' classification for exceeding the UK insurance industry's recommended vehicle security measures. Full model range pricing and insurance groups are given in the table below.

MODEL	OTR PRICE	INSURANCE GROUP
RAV4 XT ₃ 2.0 VVT-i	£18,995	11E
RAV4 XT ₃ 2.0 VVT-i auto	£19,995	11E
RAV4 XT ₃ D-4D 140	£20,295	11E
RAV4 XT ₄ 2.0 VVT-i	£21,495	12E
RAV4 XT ₄ 2.0 VVT-i auto	£22,495	12E
RAV4 XT ₄ D-4D 140	£22,795	12E
RAV4 XT ₅ 2.0 VVT-i	£24,495	12E
RAV4 XT ₅ 2.0 VVT-i auto	£25,495	12E
RAV4 XT ₅ D-4D 140	£25,795	12E
RAV4 T180	£26,995	13E

CREATING A NEW TREND IN SUVs

- RAV4 created a new style of vehicle at launch in 1994: fashionable and fun
- An instant sales success, attracting customers to Toyota
- Third generation RAV4 to set new benchmarks for product quality and driving performance

The Toyota RAV4 has rightly taken its place in the history of modern car design as the vehicle which triggered the popularity of the compact SUV. When the original model was launched in 1994, its unique blend of rugged good looks, off-road capability and on-road performance set new market standards that inspired motorists and prompted other manufacturers to develop their own, rival products.

The RAV4 gave drivers looking for a change from traditional C segment hatchbacks the opportunity to enjoy the benefits of off-road performance and style, without the compromise to on-road driving dynamics typical of larger 4x4 vehicles. The RAV4 was instantly fashionable and fun.

This heritage was acknowledged by the team which has created the new third generation RAV4, as Executive Chief Engineer Kiyotaka Ise explained: “The RAV4 is a

unique compact SUV that offers our customers a fun driving experience on all types of roads.

“People find SUVs attractive because they are out of the ordinary, definitely different from the average car. The new generation RAV4 had to maintain this extraordinary flair.”

A BRIEF HISTORY

- Original concept created in 1989
- Toyota launches its Recreational Active Vehicle with four-wheel drive in 1994
- Fully revised second generation model launched in 2000

For a car that would transform the SUV market, the RAV4 was a long time in development. Toyota first held internal briefings in 1986, with a concept model unveiled at the 1989 Tokyo Motor Show. It wasn't until 1994 that the first production RAV4 was presented, at the Geneva show.

First sales were in Japan in May 1994, with the European market opening the following month. Initial estimates were for 4,500 sales a month, but when 8,000 orders were placed in the first month, production volumes were doubled.

The Chief Engineer of the original model, Mr M. Nonaka, said at the time: “Looking back at the development of the car, I think the toughest part was getting it all started. I strongly feel we have the product to meet the needs of young and youthful customers looking for the diversity the RAV4 offers.”

He defined the RAV4 as being “civilised excitement”, identifying its key qualities as its fun, sporty design; its outstanding driving performance; and its ‘fun’ orientated looks and specifications. These attributes remain as true today as they were in 1994, but with more mature and refined execution.

The first generation RAV4 was steadily refined, but remained basically unchanged until 2000, when it was redesigned to take account of the increasingly sophisticated and competitive compact SUV market. The new model was roomier, sportier and more versatile, with increases in both overall length and wheelbase dimensions.

Styling was bolder and more aerodynamic, with product quality and interior packaging that responded to improved standards in engineering and higher customer expectations – changes that helped ensure the RAV4 remained at the top of the sales tables.

Sales performance was further boosted with the launch of new D-4D diesel engines in the range in Europe towards the end of 2001.

A SALES SUCCESS

- Worldwide sales success
- Best-selling compact SUV ever built
- Best-selling SUV in Europe

The Toyota RAV4 has proved more successful than any compact SUV the world has known, with more than 1.835 million models sold from the time of launch to the end of 2004.

Just less than 30 per cent of all sales have been in Europe, where the RAV4 ranks as the top selling SUV. In spite of the second generation model reaching the fifth year of its product cycle and an increasingly competitive market place, sales volumes continued to grow: RAV4 claimed 26 per cent of all European SUV sales, with more than 109,000 units in 2004, while in 2005, the final share is expected to be around 21 per cent. In the past 10 years, compact SUV sales have grown by more than 300 per cent, much of this growth fuelled by the success of RAV4.

Performance in the UK has been consistently strong with sales from 1994 to 2005 exceeding 113,000. In 2004 RAV4 recorded 14,234 registrations in Great Britain , its fourth most successful year since the range was introduced in 1994.

THE NEW CHALLENGE

- To maintain the best-selling status
- To set new benchmarks for product quality and driving performance
- To enter the premium compact SUV market

The new Toyota RAV4 has a clear task, to maintain its position as Europe's market-leading compact SUV and to set new benchmarks in its sector for product quality, driving performance, technology and customer benefits.

It consolidates its reputation for strong driving performance with its new Integrated Active Drive System, enhanced diesel engines and new six-speed manual gearbox. At the same time, it exceeds customer expectations with its highly efficient packaging and modularity, with more space inside and the benefit of the Toyota Easy Flat rear seat folding system.

Moreover, with 15 per cent of sales of the outgoing RAV4 being made to customers moving from premium brands, the new RAV4 T180 flagship model will challenge the emerging premium compact SUV sub-segment. This part of the market is expected to almost double current sales volumes by 2007.

Although the new RAV4 retains its SUV styling, its design crosses over into other vehicle segments with MPV-style interior flexibility and estate car levels of interior space.

"The launch of the first RAV4 in 1994 created one of the most dynamic trends in the automotive industry in recent years," said Andrea Formica, Toyota Motor Marketing Europe's Vice President Sales and Marketing. "This success story has contributed strongly to Toyota's image in Europe. Today, with a unique blend of technology, versatility and quality, the all-new third generation RAV4 will reset the standards the original model established a decade ago and redefine customers' expectations."

THE UK MARKET

Toyota recognises that its customers are confident and assured in their lifestyle choices; RAV4 owners typically see themselves as progressive, wanting to stand out from the crowd and are "ahead of the curve" in terms of their car buying choice. The new RAV4 will reinforce this perception with its advanced styling and technology.

The primary market target for the new RAV4 will be well educated young families in the 35 to 45-year-old age bracket. But, as before, the model will also appeal to youthful 'empty nesters' in the 55 to 65 age group.

Sales forecast

The new RAV4 will go on sale in the UK on 6 February with a sales target of around 13,000 units for 2006. In Europe, Toyota is aiming for around 100,000 full-year sales.

Toyota expects 53 per cent of the UK total to be D-4D diesel models. XT₄ models should account for about 40 per cent of the total, with XT₃ versions making up around 37 per cent. The flagship T180 should claim in the region of 10 per cent of sales.

A COMPETITIVE PROPOSITION

The price structure of the new RAV4 range makes it a strong proposition in the heart of the compact SUV market, against its established segment rivals, the Nissan X-TRAIL and Honda CR-V.

As well as being competitive on price, the RAV4 offers superior specification. None of its key competitors can offer a driver's knee airbag (standard on all versions of the RAV4), or match the flexibility and ease of use of the Toyota Easy Flat folding rear seat system.

RAV4 T180 in the premium segment

The quality, performance and high specification of the new T180 model moves the new RAV4 firmly into the premium market, where the BMW X3 is established as the key player.

Comparing price and equipment levels, the Toyota represents exceptional value, without compromising quality. In terms of on-the-road price, it is virtually identical to the X3 2.0d, but when like for like equipment levels are taken into account, the Toyota leaves the BMW standing: remote audio controls, front fog lights, sunroof, split-folding rear seats, leather upholstery, cruise control, full map satellite navigation, Smart entry and Smart start, heated and electrically adjustable seats and rain-sensing wipers are all standard on the T180, but extra cost options or unavailable on the BMW.

Factoring in the cost of specifying the X3 to the same standard as the T180, the price tag on the BMW rises to more than £32,000 – over 20 percent higher than the price of the Toyota.

Price and specification comparison, RAV4 T180 and BMW X3 2.0d

MODEL	TOYOTA RAV4 2.2 D-4D T180	BMW X3 2.0d
Body style	5dr hatchback	5dr hatchback
Engine size	2.2	2.0
Max. power (bhp)	175	150
No of speakers	6	6
Audio with in-dash CD player	✓	✓
Remote audio controls	✓	✗
Exterior temperature display	✓	✓
Trip computer	✓	✓
Front fog lights	✓	✗
Central double locking	✓	✓
Remote central double locking	✓	✓
Sunroof	✓	✗
Front passenger airbag	✓	✓
Front side airbags	✓	✓
Curtain shield airbags (f & r)	✓	✓
Driver's knee airbag	✓	✗
Leather seats	✓	✗
Rear seats – bench	✗	✓
Rear seats – split bench	✓	✗
Leather steering wheel trim	✓	✓
S/wheel telescopic adjustment	✓	✓
ETC	✓	✓
Stability control	✓	✓
MODEL	TOYOTA RAV4 2.2 D-4D T180	BMW X3 2.0d
Air conditioning	✓	✓

Dusk-sensing headlights	✓	✗
Rain-sensing wipers	✓	✗
Heated front seats	✓	✗
Glovebox cooler	✓	✗
Full map DVD satellite navigation with Bluetooth connectivity	✓	✗
Smart entry and Smart start	✓	✗
Electric door mirrors	✓	✓
Heated door mirrors	✓	✗
17in alloys	✗	✓
18in alloys	✓	✗
On-the-road price	£26,995	£26,960
Comparison to RAV4 benchmark	-	-0.1
Specification adjusted price	£26,995	£32,495
Comparison to RAV4 benchmark	-	+20.4

Designed for Modern Life

- Rugged and modern design
- Superior perceived quality throughout
- Compact outside, big inside
- Excellent modularity, appealing to families
- Premium equipment levels

Each generation of the Toyota RAV4 has followed the same ground-breaking design cues with which the original model created the compact SUV market, combining versatility, design and outstanding driving dynamics.

The all-new, third generation RAV4 continues this pioneering spirit, but, in response to modern customer demands, benefits from more premium quality, increased interior space and intelligent, flexible interior packaging.

The new model has been created according to Toyota's *Vibrant Clarity* design philosophy. There is clarity to the design, with individual elements reduced in number and increased in size. The trapezoidal grille provides a direct reference to other Toyota SUV models and differentiates the RAV4 from the core saloon car range.

Executive Chief Engineer Kiyotaka Ise explained: "Design sketches were used to gauge the reaction of customers from countries all over the world. This feedback led us to adopt 'Modern Rugged' as our design theme. Focusing on this theme, we sculpted a stylish yet rugged design."

DISTINCTIVE EXTERIOR STYLING

- Styling cues from previous generations
- Increased length and width
- Strong premium quality
- Compact outside, big inside

The new RAV4 inherits and develops the strong Toyota brand DNA that is recognised and appreciated by customers across the world. At the same time it combines a space-efficient box shape and more stylish, rounded forms to distinguish itself from other SUVs.



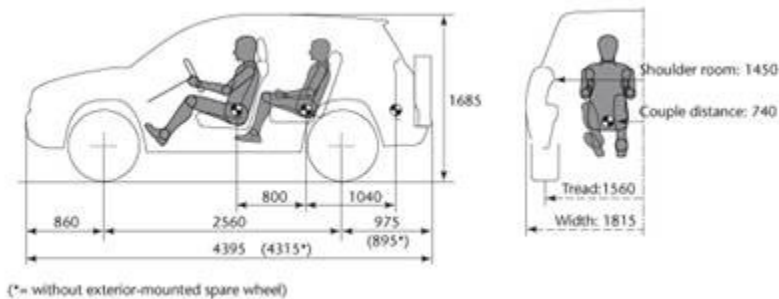
The cabin has a distinctive silhouette with a strong arc line that blends with the wedge shape of the wings. The wedge form of the lower body design suggests agile driving performance, while the dynamic wing shape emphasises stability.

The new RAV4 has a strong posture and looks firmly planted on the road, with bold sides and a wide track. Sharp cut lines around the rear echo the 'vibrant' theme.

Excellent aerodynamic design gives the RAV4 a drag coefficient of 0.31Cd, the best in its segment. Smooth airflow around the car aids fuel consumption, quiet running at high speed and stability.



The vehicle is 145mm longer than the previous generation model at 4,395mm (4,315 for T180 without rear-mounted spare wheel) and has a significantly longer wheelbase (+70mm) and rear overhang. This allows passenger comfort to be greatly improved: cabin length is up by 85mm (to 1,820mm) and the couple distance between front and rear seats is greater by 55mm.



Vehicle width has grown by 80mm, allowing the front seats to be set further apart and improving shoulder room. The RAV4 is still lower than many of its market rivals, emphasising its sleek profile, but there is more rear headroom, enabling five adults to travel in comfort.

And despite the longer wheelbase, the turning radius has been reduced to 5.1 metres, tighter than many competitor models.

PREMIUM INTERIOR DESIGN AND INGENIOUS PACKAGING

- Premium quality interior design
- Open and spacious cabin

The precise design and execution of the interior underscores the new RAV4's premium quality. The elimination of break lines, reduction of panel gaps and the careful matching of surface levels all contribute to the vehicle's all-round engineering excellence.

"We aimed for an interior typical of an SUV, yet with a premium feel," said Kiyotaka Ise. "We placed a vertical column in the centre of the instrument panel to emphasise the vehicle's powerful character and added a premium feel with a twin-level winged shape for the dashboard. High quality materials and tight panel fit feature throughout."

Angular design cues in the interior reflect the *Vibrant Clarity* theme. The cross-section of the dashboard and door trim panels is emphasised to create a more open and spacious feel, while the three-dimensional treatment of the door architecture adds a degree of sportiness.

Interior volume is now 3,822 litres, an increase of 13 per cent on the outgoing model. The benefit of this is most evident in the luggage compartment, the rear passenger headroom and the shoulder room for all occupants. Load capacity is 586 litres with the seats in place, growing to 1,469 litres when the rear seats are folded down.

Space has been gained with help from a newly-developed rear suspension system, in which the shock absorbers are positioned diagonally beneath the rear floor. This increases the load area width by 230mm and delivers 47 per cent more useful luggage space.

PRACTICAL, FLEXIBLE INTERIOR

- Unique Toyota Easy Flat rear seat folding system
- Flexible luggage and storage space
- Numerous comfort and convenience features

Toyota RAV4 customers typically lead active lives and need to be able to adapt their vehicle to meet different demands, for example to accommodate a growing family. The Toyota Easy Flat seating system in the new RAV4 delivers practicality and modularity that competitor models cannot match.

Using either of two one-touch levers, easily reached from either of the rear passenger doors or the rear tailgate, the rear seats can be folded down into the rear floor space. Seat cushions and headrests do not have to be removed and the result is a clear, flat load space.

The rear seats are divided 60:40 for added flexibility and can be individually reclined. They can also be slid fore and aft through more than 165mm for extra legroom or load space, as required. There is also a 50 litre storage space under the flat boot floor, where items can be kept out of sight and where the rear luggage cover can be stored when not in use.

The practical character of the new RAV4 is also revealed in the numerous convenience features around the cabin. These include upper and lower gloveboxes, a glovebox cooler (on XT₄ grade and higher), generously proportioned door pockets with bottle holders, a mobile phone holder in the centre console and larger, illuminated cupholders. For rear seat passengers, there are two cupholders in the centre armrest.

PREMIUM EQUIPMENT LEVELS

- Optitron instrumentation
- Full Map DVD navigation available

The new Toyota RAV4's premium quality is emphasised by its excellent standard equipment levels.

All versions are fitted with hi-tech Optitron instrumentation, with three analogue meters. The combination meter lights illuminate in sequence from the Ignition ON indicator light, to the multi-information display and then the meter dials. The dials have a sophisticated appearance, with graduated amber illumination.

A liquid crystal multi-information display in the centre of the speedometer provides odometer, tripmeter, outside temperature, driving monitor and key warning data and can be customised with a choice of six languages and metric or imperial units.

Audio, air conditioning and, where fitted, navigation systems are housed in the centre console, which has a brushed metallic finish.

Standard equipment features on all models include air conditioning and a six-speaker radio and CD unit which is also capable of reading MP3 and WMA files. Luxury features on higher grade models include dual zone climate control air conditioning; full map DVD-based satellite navigation with touch screen operation and Bluetooth connectivity; keyless Smart Entry and Smart Start system; rain-sensing wipers; and dusk-sensing headlights.

UK GRADE STRUCTURE

- Four trim levels - XT₃, XT₄, XT₅ and T180
- Significantly improved equipment specifications
- Alloy wheels, air conditioning and driver's knee airbag standard on all models

In the UK the new RAV4 will follow the core grade structure of the previous model, with XT₃, XT₄ and XT₅ designations, but with significantly improved equipment levels.

In addition, there will be a flagship T180 model, powered exclusively by Toyota's high-output 2.2-litre D-4D 180 common rail diesel engine. More details about this model can be found in a separate chapter in this press pack.

Key grade features

XT ₃	XT ₄	XT ₅	T180
Roof rails	Front fog lights	Heated front seats	18-inch alloy wheels with run-flat tyres
17-inch alloy wheels	Electric heated and	Electric driver's seat	No tailgate-mounted

	folding door mirrors	adjustment	spare wheel
Manual air conditioning	Dual zone climate control	Cruise control	Chrome front grille
Electric power steering	Leather steering wheel and gear knob trim	Auto-dimming rear view mirror	Wheelarch extensions
Front, front side and front and rear curtain airbags	Leather upholstery	Smart Entry and Smart Start system	Rear privacy glass
Driver's knee airbag	Remote audio controls	Rain-sensing wipers	Smoked headlamp glass
Tilt and telescopic adjustable steering wheel	Cooled glovebox	Dusk-sensing headlights	Tyre pressure monitoring system
Underfloor boot storage (50 litres)	Electric sunroof	Full map colour DVD satellite navigation with Bluetooth connectivity	
Three rear headrests	Six-disc CD autochanger		
Sound system with radio, CD player and MP3 and WMA capability	Integrated Active Drive system		
Active Torque Control 4WD	Hill-start Assist Control (HAC)		
Electric heated door mirrors	Downhill Assist Control (DAC, automatic models)		

RAV4 T180 – The Premium Challenger

- High performance D-4D 180 engine
- Distinctive exterior styling
- Top speed 124mph; 0-62mph in 9.3 seconds
- Premium equipment levels

The T180 is the flagship of the third generation RAV4 range and takes Toyota into the emerging premium compact SUV market with its high quality and superior specification. Sales in this market sector are predicted to rise from 46,000 in 2004 to 75,000 by 2007.

Fifteen per cent of RAV4 customers in the UK were previously owners of premium brand models. The new T180 is thus ideally placed to extend the RAV4's appeal in this area even further.

The T180 has been made possible thanks to the premium quality and active driving performance that are characteristic of the new RAV4 range. Intelligent packaging (compact on the outside, roomy on the inside), a high degree of modularity (Easy Flat folding rear seat system) and advanced technology driving controls (Integrated Active Drive System) combine with contemporary design and high equipment levels to enable the RAV4 to meet and exceed the expectations of premium brand customers.

As well as exclusive equipment features, the T180 benefits from Toyota's high performance D-4D 180 diesel engine, the most powerful diesel unit in its class giving a top speed of 124mph and 0-62mph in 9.3 seconds.

STRIKING EXTERIOR STYLING

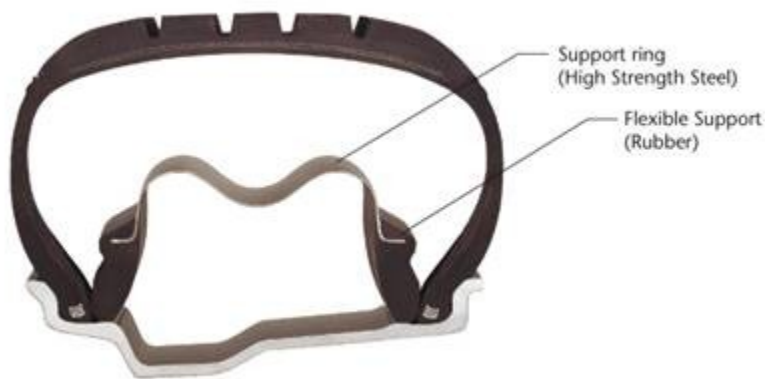
The RAV4 T180 is instantly recognisable thanks to its individual and striking exterior styling. It will be alone in the RAV4 range in not having a spare wheel mounted on the tailgate. Instead, it is fitted with run-flat tyres and an advanced tyre pressure monitoring system.

Other distinguishing features include a dedicated front grille with chrome details, wheelarch extensions and exclusive 18-inch alloy wheels. Darkened rear privacy glass is fitted as standard and the headlamps have a smoked finish.

RUN-FLAT TYRES

The RAV4 T180 is the world's first SUV to use new high performance run-flat tyres developed by Bridgestone. These feature an innovative internal steel ring that will support the weight of the vehicle and help wheel rotation in the event of a puncture.

The strong point of this advanced design is that the thickness of the tyre wall does not have to be increased in order to gain run-flat capability, which means the tyre retains its original compliance and ride comfort qualities.



On the RAV4 T180 these tyres are guaranteed when punctured to have a range of 100 miles at speeds up to 56mph.

As an additional safety measure, supporting the use of the run-flat tyres, the RAV4 T180 is equipped with a tyre pressure monitoring system which alerts the driver the moment any deflation is detected.

A Wide Choice of Powertrains

- Toyota D-4D advanced diesel engine technology

- D-4D 180 most powerful engine in its class
- Latest development of 2.0-litre VVT-i petrol unit

The Toyota RAV4 has a well-established reputation for great driving performance, a quality that is enhanced in the new generation model. Three engines and three transmissions are offered, enabling customers to choose their preferred balance of performance, fuel economy and low emissions.

Heading the engine line-up is Toyota's D-4D 180 unit, the most powerful diesel in its class. Available only in the flagship T180 model, it delivers a top speed of 124mph and 0-62mph acceleration in 9.3 seconds, with combined cycle fuel economy of 40.4mpg. And thanks to Toyota's pioneering D-CAT (Diesel - Clean Advanced Technology) system, it produces the lowest combined nitrogen oxides (NOx) and particulate matter (PM) emissions in its segment.

Completing the range are the D-4D 140 diesel engine and the latest development of Toyota's 2.0-litre VVT-i petrol engine.

THE D-4D RANGE

- All-aluminium cylinder block
- Low compression ratios
- Advanced variable nozzle turbochargers

The new RAV4 is the latest model to adopt Toyota's new generation of 2.2-litre D-4D engines, following their deployment in the Avensis and Verso.

The D-4D 180 and D-4D 140 units have common objectives of performance, fuel economy, reduced emissions and quietness, qualities achieved by combining the latest advances in Toyota diesel engine technology (including a third generation common rail injection system), all-aluminium construction and low compression ratios.

Toyota produced the world's first all-aluminium diesel engine, the 1.4-litre D-4D for the Yaris, and has built on this experience to make wider use of the lightweight metal in place of cast iron in its diesel engine designs. Where the new 2.2 D-4D units are

concerned, Toyota has adapted the aluminium block that is already used in the construction of its 2.0-litre VVT-i engine.

The light weight of the all-aluminium diesels helps reduce fuel consumption and harmful emissions and lessens the impact of engine weight on vehicle dynamics and driving performance.

To reduce weight further, the oil cooler is also made entirely of aluminium and the water and oil pumps, usually separate components, are integrated into the chain cover. Thanks to this design, the oil pump is five per cent lighter and 20 per cent more compact than before.

The low compression ratios are a key factor in improved efficiency and low noise levels. The 175bhp (177 DIN hp) D-4D 180 engine has the lowest compression ratio of any production diesel engine, at 15.8:1. The 134bhp (136 DIN hp) D-4D 140 uses 16.8:1, which is also significantly low.

A lower compression ratio means the engine requires less effort to compress the fuel-air mixture, which in turn yields improved performance with lower fuel consumption. Furthermore, by reducing the compression build-up inside the cylinder and combustion chamber, it is possible to reduce the noise and vibration caused by each explosion.

Both engines feature variable nozzle turbochargers, for maximum boost with good engine response, and advanced intercoolers that provide significantly better heat exchange performance.

For installation in the new RAV4, both engines have a redesigned exhaust system with a compact silencer, allowing for a lower and flatter underfloor. The main silencer mounting position has been changed, permitting more luggage space and reduced noise levels during idling.

THE D-4D 180

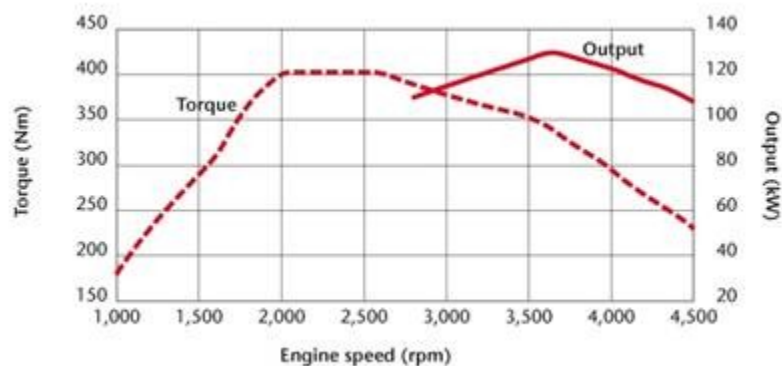
- Most powerful diesel engine in its class
- Equipped with Toyota D-CAT
- Piezoelectric fuel injectors

- High performance ceramic glow plugs
- Improved power, torque, economy and emissions compared to 2.0-litre D-4D



The D-4D 180 engine allows the new RAV4 to fully express its active driving potential and challenge established models in the premium SUV sector. Its combination of a low compression ratio and high boost turbocharger creates remarkable power output and engine efficiency.

A new 32-bit processor is used in the Toyota Computer Controlled System (TCCS) for accurate, optimum and simultaneous control of the fuel injection, injection timing, idle speed control (ISC), fuel pressure, glow relay and exhaust gas recirculation (EGR), as well as the air conditioning cut-out, to achieve high performance and strong fuel economy.



The D-4D 180 is the most powerful diesel engine in its class, delivering 175bhp (177 DIN hp) at 3,600rpm and a flat torque delivery of 400Nm from 2,000 to 2,600rpm. This enables the RAV4 T180 to reach 124mph and accelerate from rest to 62mph in 9.3 seconds, while also ensuring excellent mid-gear acceleration.

As well as delivering almost 50 more horsepower and 150 more Newton-metres of torque than the previous RAV4's 2.0-litre D-4D unit, the new D-4D 180 is also cleaner and more fuel efficient. Combined cycle fuel consumption is improved from 39.8 to 40.4mpg and carbon dioxide emissions fall from 190 to 185g/km. The decrease in CO₂ emissions places the RAV4 T180 in a lower band for Vehicle Excise duty than the previous 2.0-litre D-4D models.

As well as being powerful, the D-4D 180 is also clean, thanks to Toyota's advanced and unique D-CAT, an emissions control technology which simultaneously reduces nitrogen oxides (NOx) and particulate matter (PM) emissions. D-CAT brings exhaust emissions well below the Euro IV standards, greatly reducing the levels of hydrocarbons (HC), carbon monoxide (CO), NOx and PM.

The heart of Toyota D-CAT is the Diesel Particulate NOx Reduction (DPNR) four-way catalyst. By simultaneously and continuously reducing both PM and NOx in the exhaust gases, it delivers substantially cleaner engine performance: figures for combined PM and NOx are lower than for any other diesel engine its class. And, crucially, the DPNR is maintenance-free, unlike most particulate filter systems currently on the market.

The D-4D uses piezoelectric injector technology, which permits faster and more accurate fuel injection during the combustion cycle. Operating at pressures up to 1,800 bar, this common rail system can deliver up to five injections per cycle, giving greater efficiency. Lower combustion impact reduces the level of engine noise.

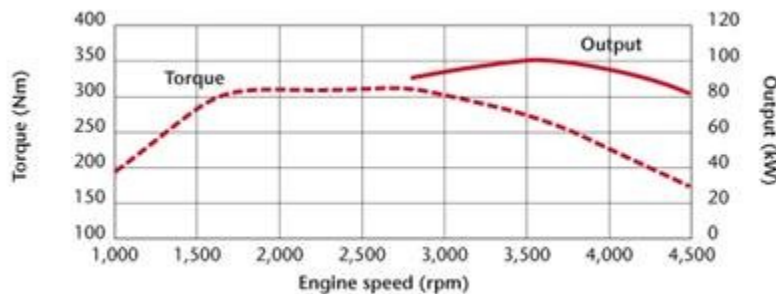
Ceramic glow plugs are used, which are able to withstand higher temperatures and maintain the same efficiency levels for longer periods than conventional metallic ones. They also reach their ideal operating temperature more quickly, allowing more rapid cold starts in cold weather.

THE D-4D 140

- Predicted to be the best-selling engine
- Balanced performance and economy
- Reduced noise and vibration

The D-4D 140 is expected to be the best-selling engine in the new RAV4, available across the range and delivering good performance and economy.

Like the more powerful D-4D 180, it uses 32-bit processor technology for accurate and optimum control of the main engine functions to give enhanced engine efficiency. Maximum output of 134bhp (136 DIN hp) enables a top speed of 112mph and nought to 62mph acceleration in 10.5 seconds.



Maximum torque of 310Nm is produced between 2,000 and 2,800rpm, giving excellent in-gear acceleration and flexible driving performance, while maintaining fuel economy: the combined cycle consumption figure is 42.8mpg.

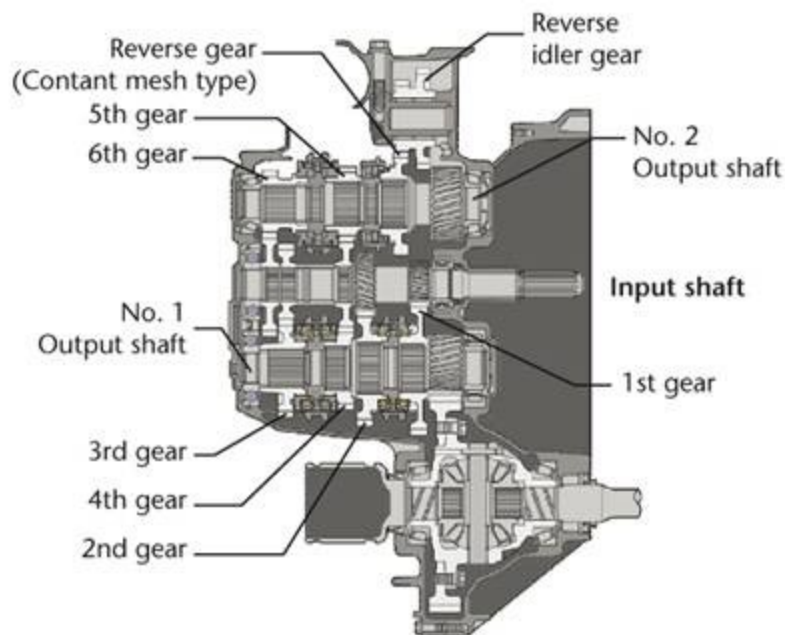
With a low 16.8:1 compression ratio, the D-4D 140 is one of the smoothest diesel engines available on the market. This quality is further enhanced by the use of scissor gear-driven balancer shafts, which improve acceleration feel, reduce engine vibration and cut noise levels at high speed. Combustion noise is also reduced, thanks to the use of a rotary solenoid diesel throttle and a highly responsive linear Exhaust Gas Recirculation (EGR) valve control.

The high pressure, third generation common rail diesel injection runs at pressures up to 1,700 bar, using robust solenoid injectors.

SIX-SPEED MANUAL TRANSMISSION

- Fitted as standard to D-4D diesel models
- Contributes to strong performance and economy
- Smooth, slick gear changes

Versions of the new RAV4 equipped with 2.2-litre D-4D power are fitted as standard with the latest Toyota six-speed manual transmission, which gives smooth, quick and precise gear changes. The six ratios have been selected to help drivers make the most of the performance available to them, without compromising fuel consumption.



A multi-cone synchroniser is featured on first to fourth gears, which requires less force to manoeuvre and contributes to smoother and more precise gear shifting. A lever-type synchroniser ring for reverse gear also reduces the level of shift effort.

The unit is compact, but retains a high torque capacity with a three-shaft configuration (one input and two output shafts) and common use of the same drive gear for fourth and fifth and first and reverse gears.

Good fuel economy is supported by the use of an oil separator, low resistance bearings and low viscosity gear oil.

SMOOTH PETROL VVT-i ENGINE

- Latest development of Toyota's 2.0-litre petrol engine
- More advanced engine control
- Optional four-speed automatic transmission

The new RAV4 is also available with the latest development of Toyota's 2.0-litre VVT-i petrol engine, a unit that was offered in the previous model range. The engine is newly equipped with a more sophisticated engine control system, which notably helps reduce fuel consumption by adjusting the alternator generating voltage.

The engine is smooth and powerful, making excellent use of Toyota's VVT-i (Variable Valve Timing – intelligent) technology to boost low end power and reduce fuel consumption. In the new RAV4 it develops 150bhp (152 DIN hp) at 6,000rpm and a maximum 194Nm of torque is available at 4,000rpm.

An advanced four-speed automatic transmission is available as an option in place of the standard five-speed manual gearbox. It is a compact and highly responsive unit with a smooth shift feel. Particular attention has been paid to improving fuel economy through low friction technology.

The gearbox controls gear changes when travelling uphill to reduce the number of shifts and also makes downhill driving easier and more comfortable by creating engine braking when required.

Equipped with the 2.0-litre VVT-i engine, the new RAV4 will accelerate from nought to 62mph in 10.6 seconds and achieve a top speed of 115mph. With automatic transmission, the figures are 12 seconds and 109mph. Combined cycle fuel consumption is 32.8mpg for the manual version and 31.4mpg for the automatic.

TOTAL DRIVING CONTROL

- First-in-segment Integrated Active Drive System
- Technology enhances performance, handling and safety
- Anticipates limit of vehicle dynamics

- Unobtrusive activation improves driving experience

The Integrated Active Drive System is exclusive to the new Toyota RAV4 and marks a world first in the compact SUV segment. It takes a series of separate vehicle technologies and combines them into a single package, using high-speed data communications.

The three elements in the system are Active Torque Control four-wheel drive, Vehicle Stability Control Plus (VSC+) and Electric Power Steering (EPS).

The system monitors vehicle conditions in real-time through:

- Individual speed sensors on each wheel
- A yaw rate sensor, which monitors the attitude of the vehicle, with acceleration and deceleration sensors fitted to both sides and the front and rear of the vehicle
- Throttle sensor, crankshaft position sensor, brake pressure and pedal stroke sensor, steering angle sensor and steering torque sensor, which determine the level of driver input and enable integrated control
- EPS actuator, which provides steering torque assistance when required

The input received from all the sensors allows the Integrated Active Drive System to determine any deviation from the vehicle's normal dynamics parameters. If such a situation is detected, it will activate coordinated counter-measures to maximise vehicle performance and stability. The system is fitted as standard to XT₄ models and higher.

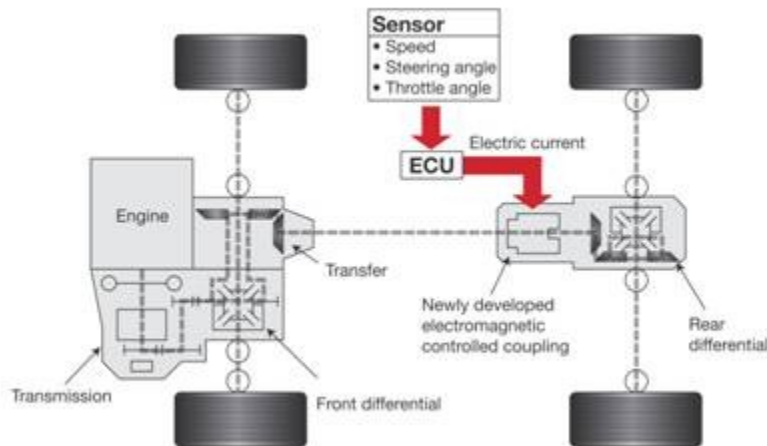


ACTIVE TORQUE CONTROL 4WD

- Key element of the Integrated Active Drive System
- Adjusts front to rear torque transfer
- Ensures optimum stability in all driving conditions
- Standard on all models

The Active Torque Control 4WD system continuously monitors and controls the transfer of torque between the front and rear wheels and is standard on all new RAV4 models.

Instead of a conventional centre differential, electronic sensors are used to monitor information from the throttle angle, engine torque and speed, gear ratio, vehicle speed and steering angle. This allows RAV4 to switch between front and four-wheel drive modes to ensure stability in all driving conditions and reduce fuel consumption.



When moving off from standstill, the vehicle requires maximum traction and acceleration. The system automatically and seamlessly distributes the torque to both front and rear wheels in a front:rear ratio up to 55:45.

In normal driving conditions, the system can switch from four to front-wheel drive (100:0 distribution), helping fuel economy. The distribution can then vary between 100:0 and 55:45 to meet different driving demands. For example, when cornering the system will

calculate the appropriate front to rear torque transfer by monitoring the vehicle's yaw rate and, if required, apply it to bring the vehicle back under control.

In addition to the Active Torque Control, the driver can lock the torque distribution to 55:45 using the 4WD lock button on the dashboard. This can help free the vehicle should an individual wheel lose grip in off-road conditions. Once vehicle speed exceeds 25mph, the system is automatically switched off.

VEHICLE STABILITY CONTROL PLUS (VSC+)

- Second key element of the Integrated Drive System
- Works in conjunction with EPS – the third element – to add steering torque assistance
- Helps driver input correct steering control
- Standard on XT₄ and above

In most vehicles the various stability control elements, such as the ABS, traction control and power steering, work independently of each other. Toyota's VSC+ integrates these functions and then works with the Active Torque Control 4WD within the Integrated Active Drive System.

VSC+ works in conjunction with the EPS to control not only the speed of individual wheels (like a conventional VSC system), but also to add steering torque assistance to help the driver correct a skid. It anticipates a skid, understeer, or oversteer and assists the driver by making the correct steering action easier and the incorrect action more difficult.

PRECISE STEERING RESPONSE

- Latest generation Electric Power Steering (EPS)
- Less maintenance required, more fuel efficient
- Precise steering feel and response
- Tight turning circle

The RAV4 has high response, mechanical rack and pinion steering with a newly developed Electric Power Steering (EPS) system mounted on the column. A high efficiency brushless electric motor applies torque to the column, to reduce the amount of steering effort required from the driver. The degree of torque varies according to vehicle speed, delivering easy but precise steering and excellent response.

EPS is significantly more efficient than hydraulic systems and requires less maintenance. It is compact, environmentally friendly and contributes to the RAV4's good fuel economy.

The agility of the new RAV4 is demonstrated by its tight turning circle, a quality that is often an issue with SUV owners. In spite of the greater overall length of the new model, it can turn in a smaller, 5.1 metre radius.

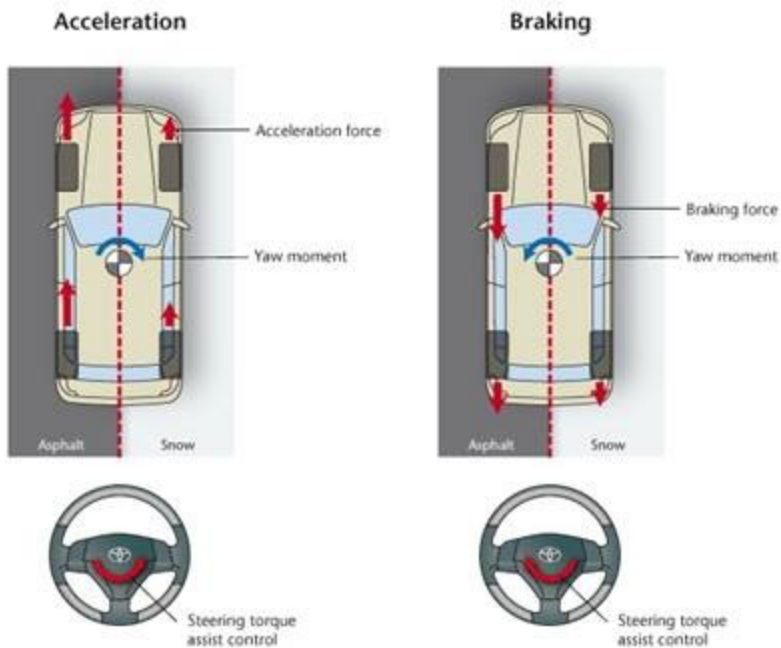
INTEGRATED ACTIVE DRIVE SYSTEM

The different elements of Integrated Active Drive come together to provide remarkable levels of stability and vehicle control in all conditions.



Braking or accelerating on a slippery road

Braking or accelerating in a straight line on a road with differing levels of grip will cause a conventional vehicle to pull to one side.



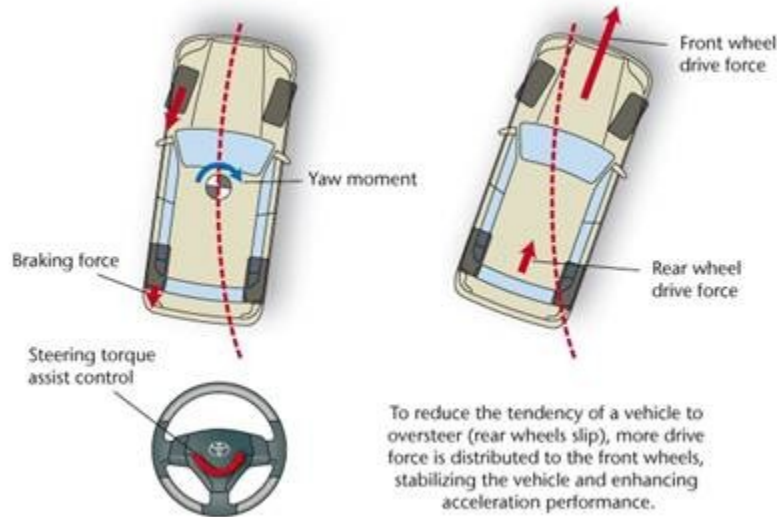
The Integrated Active Drive System detects the vehicle's yaw rate and instantly applies the necessary controls to bring it back into line. These controls could include:

- Adjustment of engine output to reduce wheelspin
- Braking of individual wheels to reduce wheelspin
- Steering torque assist to help the driver input the correct steering angle
- Transfer of torque between front and rear wheels to improve stability

Oversteer

In an oversteer situation, the rear of the vehicle starts to swing away from the line of cornering and the nose tends to tuck in. The Integrated Active Drive System will sense that the vehicle is about to slide and apply the necessary controls to maintain the correct line, including:

- Adjustment of engine output
- Independent braking of the appropriate wheels to adjust the line of travel



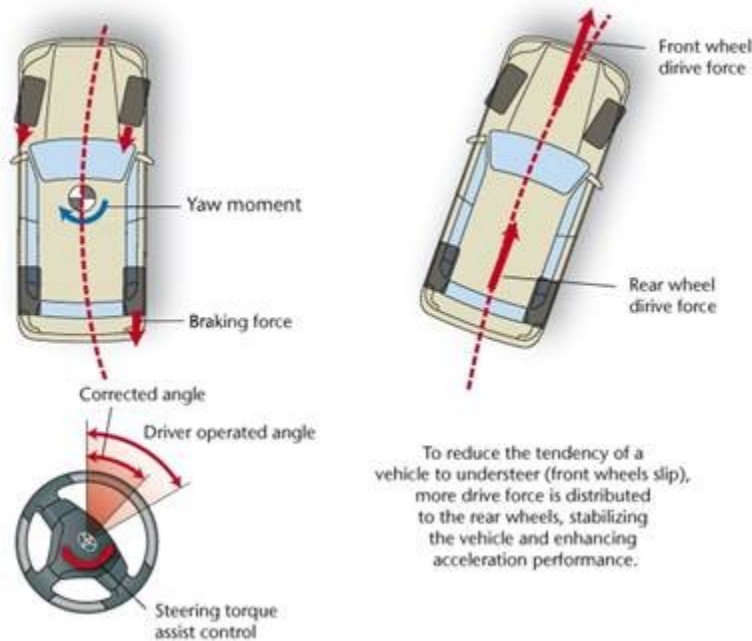
- Steering torque assist applied in the counter-steering (opposite lock) direction to help the driver make the right steering input.
- Torque transfer to the front wheels to improve stability. The system will adjust the transfer in line with the degree of oversteer: in small oversteer (or at the start of a skid), drive torque can vary between 100:0 and 55:45, front to rear (depending on driver throttle operation), to gain stability and allow acceleration out of the problem. As the oversteer increases, torque can be transferred fully (100:0) to the front wheels for increased stability.

Understeer

In an understeer situation, the nose of the vehicle starts to drift away from the line of cornering and the vehicle tends to run wide. The Integrated Active Drive System will sense that the vehicle is about to slide and, similarly, apply the controls needed to bring it back into line, including:

- Adjustment of engine output
- Independent braking of appropriate wheels

- Steering torque assist to help the driver obtain the correct steering angle, applying torque in the reverse direction
- Torque transfer to the rear wheels to improve stability. As above, the system will adjust the degree of torque transfer in line with the extent of the understeer.



HILL-START ASSIST CONTROL (HAC)

A new assist control system (XT₄ and above) provides additional help when negotiating a hill-start in slippery or difficult conditions. Hill-start Assist Control prevents the vehicle from slipping backwards when the brake is released when pulling away, on models with both manual and automatic transmission. It operates in forward and reverse gears.

HAC operates when the RAV4 is stopped on a slope with the parking brake off. When extra pressure is applied to the brake pedal, hydraulic pressure is applied to the wheel brakes, holding them on for a maximum of two seconds – sufficient time for the vehicle to move off smoothly.

A buzzer sounds to alert the driver when HAC has been operated and an indicator light is illuminated. The brakes are released as soon as the accelerator pedal is depressed; if the brake pedal is pressed again; or if the two-second time limit is reached.

DOWNHILL ASSIST CONTROL (DAC)

XT₄ and XT₅ models fitted with automatic transmission also benefit from Downhill Assist Control (DAC).

During a steep descent, the engine braking force alone may not be sufficient to reduce speed. DAC assists the driver by automatically applying appropriate hydraulic pressure to the brakes to maintain a constant low speed, without the wheels locking. This increases control when descending slopes off-road.

DRIVING PLEASURE

- Premium quality ride and handling
- All-new suspension design
- Low levels of noise and vibration

The third generation Toyota RAV4 aims to deliver increased driving pleasure, not just through the active performance gained from some of the most technically advanced and powerful engines in its class, but also through its all-new chassis and suspension design.

“The new RAV4 is designed for driving pleasure in a way that will differentiate it from other compact SUVs,” said Executive Chief Engineer Kiyotaka Ise. “We focused on performance characteristics, including cornering, that make the driver feel fully confident with the vehicle and that give sure-footed stability regardless of the quality of the road surface. Noise and vibration have, at the same time, been minimised.”

The all-new front and rear suspension design is a key factor in delivering driving pleasure, devised to optimise handling and stability, while at the same time achieving excellent standards of ride comfort.

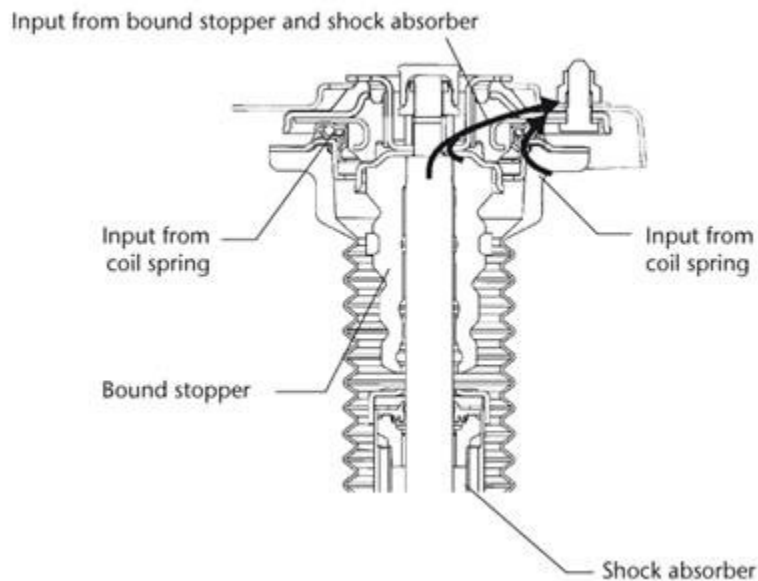
After the initial design work, early vehicle prototypes were brought to Europe for on-road conformity testing and fine tuning of the suspension.

ALL-NEW FRONT SUSPENSION

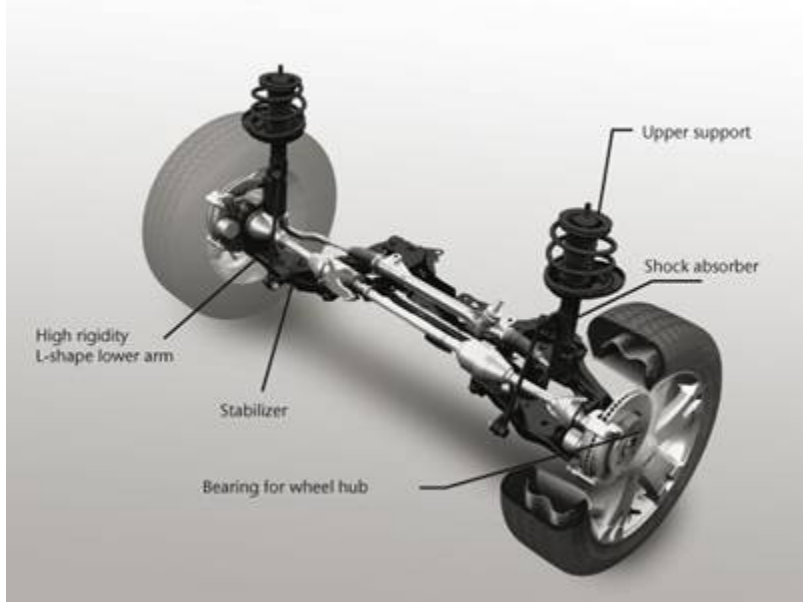
- Redesigned for improved stability

- Improved ride and comfort
- New top mount structure
- Reduced weight

The front suspension has an enhanced MacPherson strut design, engineered for a significant reduction in weight and improved passenger comfort. This has entailed a complete redesign from the lower arm to the coil springs and shock absorbers.



The top of the suspension strut features an input separation structure that effectively reduces shock transmission to the bodyshell, resulting in excellent NVH performance and improved ride comfort. The structure ensures that shock input from the coil spring is transmitted via the strut bearing, while input from the shock absorber and bump stop is transmitted via the upper support.



The suspension geometry has been designed to give excellent straight line stability and cornering ability. The lower ball joints on the bottom arm have been moved forward to increase the caster angles, promoting understeer against the lateral forces during cornering. At the same time, the roll centre height has been reduced to improve straight ahead driving stability.

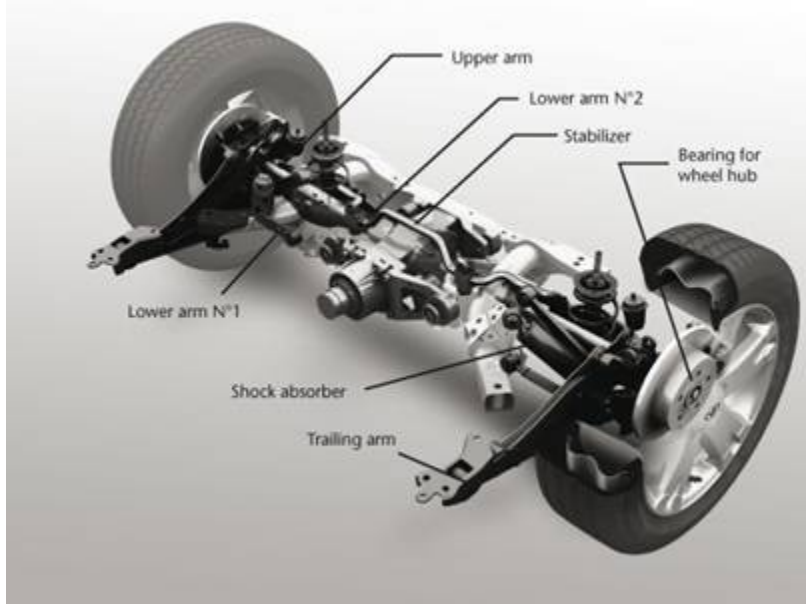
Both ends of the coil springs have been shaped to reduce size and weight. The anti-roll bar is hollow, which again reduces weight and ensures high roll rigidity.

COMPACT, ACCURATE REAR SUSPENSION

- Excellent straight line stability
- Good cornering performance
- Design contributes to improved luggage space in boot

The rear suspension is unique to the RAV4 and uses a newly-developed independent double wishbone and trailing arm design. This gives excellent straight line stability and roll stiffness for good cornering performance.

It has been engineered with an emphasis on unsprung weight, with high tensile steel stamping for the trailing arm and wishbones. This also contributes to ride comfort.



The rear shock absorbers are mounted diagonally beneath the boot floor, which frees up an additional 230mm in the width of the rear load space.

The combination of comfort and handling performance delivered by the new platform and suspension reinforces the RAV4's 'fun-to-drive' character.

LOW NOISE AND VIBRATION

- Premium quality passenger comfort
- Rigid structure for low vibration
- Additional under-bonnet insulation
- Class leading aerodynamics

Passenger comfort and driving pleasure are further enhanced by low levels of noise, vibration and harshness (NVH), setting the new RAV4 apart in the compact SUV segment as a premium quality product.

The rigid platform and the use of strong, high tensile steel for the major body panels give the RAV4 a light but stiff structure, reducing the level of vibration. Suspension top mounts and engine mounts are engineered to further reduce shock and vibration through the body structures.

Noise insulating material is used at key points in the bodyshell. The engine undercover has a cell-structure noise insulator and the floor pan is treated with an anti-vibration coating.

Toyota paid special attention to the bonnet in its efforts to reduce the level of noise transmission from the engine audible from both inside and outside the vehicle. A double layer under-bonnet insulator is made more effective by the addition of extra side seals at the edges of the engine compartment and further insulation is positioned across the top of the cowl.

The windscreen is made of acoustic glass, which helps absorb noise, the door frames have extra weather strips, and the glass frame in the front doors has an anti-vibration channel.

The RAV4's class-leading aerodynamics contribute to the noise reduction, improved fuel consumption, better high speed stability and lower levels of wind noise. Tight panel fit around key areas of the vehicle body ensures a smooth airflow and every detail, such as the uni-blade windscreen wiper, has been designed with efficient aerodynamics in mind.

SAFE AND DURABLE

- Maximum focus on safety systems
- Impact absorbing body structure
- Designed to reduce pedestrian injury
- Nine airbags as standard, including driver's knee airbag

Active and passive safety is a key feature of the new Toyota RAV4 and special emphasis has been placed on protecting both vehicle occupants and other road users. This is of particular importance, given the vehicle's target market of customers with young families.

Specific measures include the development of a new, impact absorbing chassis with minimal cabin deformation in the event of an accident, and a comprehensive package of airbags, including the segment's first driver's knee airbag.

Toyota is confident of achieving class-leading results for occupant protection in Euro NCAP crash testing. Special attention has also been paid to design features to help reduce pedestrian injuries in a collision.

Executive Chief Engineer Kiyotaka Ise said: "It took longer than we initially expected to create a structure with the best balance of crash safety and strength. However, our work paid off. We are proud we have achieved crash safety that is at the top level in this class, as a result of our extensive analysis, confirmation and evaluation work."

The new RAV4 has been designed around a 'compatibility concept' that takes account of possible impact from all directions – front, side and rear – and of impacts with vehicles of different shapes and sizes. Toyota has used its own car-to-car compatibility crash test standards, which are more stringent than those of independent testing organisations: 34mph (rather than 31mph) frontal and side collisions. Of particular note is the rear safety study, which takes account of possible high speed, offset impacts from behind.

Cabin deformation is minimised by careful design and layout of the underbody structure to absorb impact forces in the event of front, side or rear collisions. The engine compartment has a crumple zone, which absorbs energy from an impact and channels loads through the side members and into other reinforcing elements.

The passenger cabin itself is a more rigid structure, designed to resist deformation and protect the occupants. Lateral cross-members are tied to the side members to create a strong frame and also provide protection in a side impact.

The B pillar is reinforced with 590MPa high tensile steel to take impact loads away from the occupants and into a series of roof panel cross-members.

Within the passenger cell there is widespread use of energy absorbing trim in the door pillars, roof rails and front and rear door trims, to reduce the risk of injury to occupants. With typical attention to detail, even the thickness of the armrest surface has been reduced to improve its energy absorption performance.

SAFE FOR PEDESTRIANS

- Frontal energy absorbing zones

- Radiator positioned further back
- Bonnet lock redesigned and relocated

The new Toyota RAV4 has been styled and engineered with pedestrian safety as a priority, in keeping with its role as a family car driven on Europe's increasingly crowded urban streets. Toyota is confident the RAV4 will achieve high ratings in this area of Euro NCAP testing.

Executive Chief Engineer Kiyotaka Ise said: "The shape of the bonnet, grille, lamps and bumpers are of particular concern when dealing with pedestrian safety measures, so we made sure there was close contact between the designers and safety engineers in these areas. We implemented multiple studies and testing and, as a result, we were able to design contours that sufficiently ensure pedestrian safety, while achieving the modern, rugged design we sought."

Management of pedestrian safety requires the creation of energy absorbing zones around the front bumper and wings. There also needs to be energy absorbing space between the bonnet and the top of the engine.

The new RAV4 utilises energy absorbing brackets in the front wing mountings and an energy absorbing bar on the bottom of the radiator mount, below the bumper, reducing the likely impact on pedestrians. The radiator has been moved further back to create extra space behind the bumper and the headlights have been designed to collapse backwards in the event of a collision.

The bonnet itself has been redesigned to become a deformable structure and the area around the bonnet lock features crash absorbing reinforcements and a crumple zone. The lock itself has been moved back, away from the likely area for a pedestrian impact.

At the rear edge of the bonnet, the cowl has an open cross-section structure that allows its underside to crumple. The wiper motor and link arms have also been redesigned to reduce possible injuries.

SAFER FOR OCCUPANTS

- Nine airbags as standard

- First in segment driver's knee airbag
- Whiplash Injury Lessening (WIL) front seats

The new Toyota RAV4 is equipped as standard with nine airbags, including dual stage driver and passenger front airbags, front side airbags, curtain shield airbags across the front and rear side windows and, for the first time in the compact SUV class, a driver's knee airbag.

The knee airbag deploys from the lower part of the instrument panel, helping to reduce injury from contact with the steering column and lower dashboard structures. At the same time it also helps cut head and chest injuries by reducing the degree of pelvis displacement and torso rotation in a major impact.

There is a cut-off switch for the passenger front airbag to prevent inflation when a child seat is being used.

Three-point seatbelts and headrests are provided for all five occupants. The front seatbelts feature pretensioners with force limiters to control stresses on the upper body. A seatbelt warning system, with light and buzzer, operates for both front passengers.

The front seats are a second generation Whiplash Injury Lessening (WIL) concept, with headrests and seat backs designed to move forwards in the event of a rear collision. The two outer rear seats are fitted with ISOFIX brackets for child seats and there is a top tether point in the boot.

BUILT TO LAST

- Galvanised steel bodyshell
- Anti-chip protective coatings
- Comprehensive warranty

The new RAV4's body structure is built to last: highly rigid, giving excellent strength and durability.

All the major body panels are now made of galvanised steel for better anti-corrosion performance and more than 80 per cent of the body weight comprises rustproof metal.

Wax is injected into closed outer panels, such as the bonnet and front and rear doors, to increase rust resistance.

Anti-chip coating is applied to the front edge of the bonnet, the lower door sills and the front edge of the wheel arches.

In common with all new Toyota models, the new RAV4 is covered by a comprehensive, pan-European 60,000-mile/three-year warranty and 12-year anti-perforation warranty.

The new Toyota RAV4 requires servicing annually or at every 10,000 miles for a minor service and health check with major services required at 20,000 miles.

THIRD GENERATION TOYOTA RAV4 TECHNICAL SPECIFICATIONS

ENGINE 2.0-litre VVT-i	
Type	Four cylinders in-line
Cylinder head material	Aluminium
Engine block material	Aluminium
Valve mechanism	Variable Valve Timing – intelligent, 16-valve, DOHC, chain drive
Fuel system	Electronic fuel injection
Bore x stroke (mm)	86.0 x 86.0
Displacement (cc)	1,998
Compression ratio	9.8:1
Max. power [bhp (DIN hp) /rpm]	150 (152) @ 6,000
Max. torque (Nm/rpm)	194 @ 4,000
ENGINE D-4D 140	
Type	Four cylinders in-line
Cylinder head material	Aluminium
Engine block material	Aluminium
Valve mechanism	16-valve, DOHC, chain drive
Fuel system	Common rail with solenoid injectors
Injection pressure (bar)	1,700
Bore x stroke (mm)	86.0 x 96.0
Displacement (cc)	2,231
Compression ratio	16.8 :1
Max. power [bhp (DIN hp) /rpm]	134 (136) @ 3,600
Max torque (Nm/ rpm)	310 @ 2,000-2,800
ENGINE D-4D 180	
Type	Four cylinders in-line
Valve mechanism	16-valve, DOHC, chain drive
Cylinder head material	Aluminium

Engine block material	Aluminium			
Fuel system	Common rail with piezoelectric injectors			
Injection pressure (bar)	1,800			
Bore x stroke (mm)	86.0 x 96.0			
Displacement (cc)	2,231			
Compression ratio	15.8 :1			
Max. power (bhp (DIN hp) /rpm)	175 (177) @ 3,600			
Max torque (Nm/ rpm)	400 @ 2,000-2,600			
PERFORMANCE	2.0 VVT-i (5 M/T)	2.0 VVT-i (4 A/T)	D-4D 140 (6 M/T)	D-4D 180 (6 M/T)
Max. speed (mph)	115	109	112	124
0-62mph (sec)	10.6	12.0	10.5	9.3
FUEL CONSUMPTION, EMISSIONS & VED RATING				
Combined (mpg)	32.8	31.4	42.8	40.4
Urban (mpg)	25.7	24.4	34.9	33.6
Extra Urban (mpg)	39.2	38.2	50.4	46.3
Fuel tank capacity (l/gal)	60 /13.2			
CO ₂ (g/km, combined cycle)	202	212	173	185
Carbon monoxide – CO (g/km)	0.39	0.27	0.16	0.12
Hydrocarbons – HC (g/km)	0.04	0.04	-	-
Nitrogen oxides – NOx (g/km)	0.02	0.04	0.22	0.13
HC + NOx (g/km)	-	-	0.23	0.14

Particulate matter – PM (g/km)	-	-	0.016	0.003
VED Rating	F	F	E	E
SUSPENSION				
Front	MacPherson strut			
Rear	Double wishbone			
BRAKES				
Front (mm)	Ventilated discs (Ø296 x 28)			
Rear (mm)	Solid discs (Ø281 x 12)			
Additional features	ABS, Electronic Brakeforce Distribution, Brake Assist, Downhill Assist Control (A/T models only). Hill start Assist Control, VSC+, Traction Control, Integrated Active Drive System on XT ₄ models and above.			
STEERING	2.0 VVT-i & D-4D 140		D-4D 180	
Type	Rack and pinion, Electric Power Steering			
Ratio (:1)	14.4		14.6	
Turns lock to lock	2.8		2.7	
Min. turning radius – tyre (m)	5.1		5.4	
TYRES AND WHEELS	2.0 VVT-i & D-4D 140		D-4D 180	
Wheel size	17 x 7J alloy		18 x 7.5J alloy	
Tyre size	225/65 R17		235/55 R18 run-flat	
WEIGHTS	2.0 VVT-i (5 M/T)	2.0 VVT-i (4 A/T)	D-4D 140 (6 M/T)	D-4D 180 (6 M/T)
Kerb weight (kg)	1,465	1,505	1,585	1,595
Towing capacity (unbraked) kg	750	750	750	750

Towing capacity (braked) kg	1,500	1,500	2,000	2,000	
Gross Vehicle Weight (kg)	2,070	2,110	2,190	2,190	
TRANSMISSION					
Type	Electronically-controlled 4WD				
Clutch type	Dry, single plate				
GEAR RATIOS	2.0 VVT-i (5 M/T)	2.0 VVT-i (4 A/T)	D-4D 140 & D-4D 180 (6 M/T)		
1 st	3.833	3.938	3.818		
2 nd	2.045	2.194	1.913		
3 rd	1.333	1.411	1.218		
4 th	1.028	1.019	0.880		
5 th	0.820	-	0.809		
6 th	-	-	0.711		
Reverse	3.583	3.141	4.139		
Final drive ratio (f/r)	4.562/ 2.277	3.291/ 2.277	4.312 (1 st -4 th) 3.631 (5 th -6 th)/2.277		
DIMENSIONS - EXTERIOR					
Overall length (mm)	4,395 (4,315 T180)				
Overall width (mm)	1,815 (1,855 T180)				
Overall height (mm)	1,685 (1,720 with roof rails)				
Wheelbase (mm)	2,560				
Tread width – front (mm)	1,560				
Tread width – rear (mm)	1,560				
Front overhang (mm)	860				

Rear overhang (mm)	975 (895 T180)
Coefficient of drag	0.31
DIMENSIONS – INTERIOR	
Interior length (mm)	1,820
Interior width (mm)	1,495
Interior height	1,240 (1,165 with sunroof)
DIMENSIONS – LUGGAGE COMPARTMENT	
Capacity – seats in place (l)	586
Capacity – seats folded (l)	1,469
Load area length (mm)	800 (1,500 with seats folded)
Load area width (mm)	1,335
Load area height (mm)	995
OFFROAD PERFORMANCE	
Approach angle (°)	25
Ramp angle (°)	20
Departure angle (°)	20
Running clearance (mm)	200
Front axle clearance (mm)	180
Rear axle clearance (mm)	180

THIRD GENERATION TOYOTA RAV4 EQUIPMENT SPECIFICATIONS

SAFETY	XT₃	XT₄	XT₅	T180
Driver and passenger front airbags	✓	✓	✓	✓
Driver and passenger front side airbags	✓	✓	✓	✓
Front and rear curtain airbags	✓	✓	✓	✓
Driver's knee airbag	✓	✓	✓	✓
Front passenger airbag cut-off switch	✓	✓	✓	✓
Front seatbelts with Electronic Load Retractors, pretensioners and load limiters	✓	✓	✓	✓
Rear seatbelts with Electronic Load Retractors	✓	✓	✓	✓
Front seatbelt warning (light and buzzer)	✓	✓	✓	✓
Whiplash Injury Lessening (WIL) front seats	✓	✓	✓	✓
ISOFIX child seat brackets (rear, x2)	✓	✓	✓	✓
ABS	✓	✓	✓	✓
Electronic Brakeforce Distribution (EBD)	✓	✓	✓	✓
Brake Assist (BA)	✓	✓	✓	✓
Traction Control (TRC)	✗	✓	✓	✓
Vehicle Stability Control Plus (VSC+)	✗	✓	✓	✓
Active Torque Control 4WD	✓	✓	✓	✓
Integrated Active Drive System	✗	✓	✓	✓
Hill-start Assist Control (HAC)	✗	✓	✓	✓

Downhill Assist Control (DAC, 4 A/T models only)	x	✓	✓	x
Limited Slip Differential (LSD)	✓	✓	✓	✓
Tyre pressure warning system	x	x	x	✓
COMFORT AND CONVENIENCE				
Electric Power Steering (EPS)	✓	✓	✓	✓
Tilt and telescopic adjustable steering wheel	✓	✓	✓	✓
Cruise control	x	x	✓	✓
Electric windows – front and rear	✓	✓	✓	✓
Door mirrors – heated & electrically adjustable	✓	x	x	x
Door mirrors – heated, electrically adjustable and retractable	x	✓	✓	✓
Smart entry and Smart start system	x	x	✓	✓
Auto-dimming rear view mirror	x	x	✓	✓
Electric sunroof	x	✓	✓	✓
Leather steering wheel trim with additional audio controls	x	✓	✓	✓
Leather gear knob trim	x	✓	✓	✓
Illuminated entry system	✓	✓	✓	✓
12V power sockets (front and rear)	✓	✓	✓	✓
Dusk-sensing headlights	x	x	✓	✓
Rain-sensing windscreen wipers	x	x	✓	✓
AUDIO, INFORMATION & ENTERTAINMENT				
Six-speaker system with radio, CD player and MP3/WMA compatibility	✓	x	x	x
Six-speaker system with radio, six-disc CD autochanger and	x	✓	x	x

MP3/WMA compatibility				
Full-map satellite navigation with Bluetooth connectivity, six-speaker system with radio, CD player and MP3/WMA compatibility	x	x	✓	✓
VENTILATION				
Manual air conditioning	✓	x	x	x
Dual zone climate control	x	✓	✓	✓
Clean air filter	✓	✓	✓	✓
SECURITY				
Remote central locking with double locks	✓	✓	✓	✓
Locking fuel cap	✓	✓	✓	✓
Remote perimeter alarm and microwave interior protection	✓	✓	✓	✓
STORAGE				
Locking glovebox	✓	x	x	x
Locking glovebox with cooler	x	✓	✓	✓
Front armrest with two cupholders	✓	✓	✓	✓
Rear armrest with two cupholders	✓	✓	✓	✓
Driver and front passenger seatback pockets	✓	✓	✓	✓
Underfloor storage in boot	✓	✓	✓	✓
SEATING, UPHOLSTERY & TRIM				
Driver's seat manual height adjustment	✓	✓	x	x
Driver's seat electric multi-adjustment and lumbar support	x	x	✓	✓
Heated front seats	x	x	✓	✓
Fabric upholstery	✓	x	x	x

Leather upholstery	x	✓	✓	✓
EXTERIOR AND BODYWORK	XT₃	XT₄	XT₅	T180
Tinted glass	✓	✓	✓	✓
Darkened rear privacy glass	x	x	x	✓
Colour keyed bumpers	✓	✓	✓	✓
Colour keyed door mirrors	✓	✓	✓	✓
Colour keyed wheel arch extensions	x	x	x	✓
Chrome front grille finish	x	x	x	✓
17in alloy wheels	✓	✓	✓	x
18in alloy wheels with run flat tyres	x	x	x	✓
Hard spare wheel cover	✓	✓	✓	x
Rear fog lamps	✓	✓	✓	✓
Front fog lamps	x	✓	✓	✓
Roof rails	✓	x	x	x
Headlamps with smoked glass finish	x	x	x	✓