

NEW TOYOTA LAND CRUISER

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TOYOTA

ALWAYS A
BETTER WAY





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TOYOTA LAND CRUISER



QUALITY, DURABILITY AND RELIABILITY SINCE 1951

INTRODUCTION

With an off-road heritage spanning more than 65 years, the Land Cruiser remains unique in its segment for its ability to combine outstanding quality, durability and reliability with unrivalled off-road performance and ever greater levels of luxury, occupant comfort and ownership prestige.



INTRODUCTION

AVAILABLE IN MORE THAN 190 COUNTRIES worldwide, the most of all existing Toyota models, the Land Cruiser's unrivalled off-road abilities have earned it a rock-solid reputation as one of the world's toughest and most reliable 4x4s, and made it the segment sales leader in more than 10 European countries.

The new Land Cruiser further enhances this reputation with new, more modern and robust exterior styling, more sophisticated, comfortable and higher quality interior design, and improvements to its dynamic abilities and user-friendliness, both on- and off-road.

Featuring ergonomically optimised and functionally grouped switchgear, a new dashboard design incorporates the large, 8 inch Toyota Touch® 2 with Go multimedia system, Optitron driver's meters, and a steering wheel switchgear-controlled 4.2" Multi-information Display.

On-board comfort has been enhanced through the adoption of front seat ventilation, rear seat heating and automatic climate control, an electric, heated windscreen and heated washer nozzles, reverse tilting door mirrors, and a new smart key design.

In western Europe the new Land Cruiser is powered by a 130 kW/177 DIN hp 2.8 D-4D turbodiesel. For eastern European markets the model is also available with a choice of 122 kW/164 DIN hp 2.7 VVT-i and 183 kW/249 DIN hp 4.0 VVT-i petrol engines.

Key to the Land Cruiser's peerless off-road capability is its combination of a highly durable, deformation-resistant, segment-unique body-on-frame construction and the remarkable level of guidance and technical support it offers drivers.

Helping even unskilled drivers maximise the vehicle's off-road performance, the Land Cruiser's all-terrain support systems make it one of the most technically advanced, safe, pleasurable and easy to use four-wheel drive vehicles in the world.

The new Land Cruiser's off-road abilities have been even further enhanced through a choice of three rear differential variants -open, locking, or a new Torsen Limited Slip Differential (LSD).

The Multi-terrain Select System (MTS) has been improved through the addition of an AUTO Mode, which is automatically activated with the 5-speed Crawl Control function. And the range of Multi-terrain

THE LAND CRUISER'S UNRIVALLED OFF-ROAD ABILITIES HAVE EARNED IT A ROCK-SOLID REPUTATION AS ONE OF THE WORLD'S TOUGHEST AND MOST RELIABLE 4X4s

* 207 kW/282 DIN hp for models sold in Ukraine



Monitor functions has been expanded to include an Underfloor View, a Front View Rotation function, a Panoramic View and a Wide Rear View Display.

The new Land Cruiser may now be equipped with 'Toyota Safety Sense', a set of active safety technologies designed to help prevent or mitigate collisions across a wide range of traffic situations. It includes a Pre-Collision System (PCS) with a pedestrian recognition function, Adaptive Cruise Control (ACC), Lane Departure Alert (LDA), Automatic High Beam (AHB) and Road Sign Assist (RSA).

Further safety technologies include a Blind Spot Monitor (BSM) with Rear Cross Traffic Alert (RCTA) and a new, auto location Tyre Pressure Warning System (TPWS).

No other SUV can offer the new Land Cruiser's unique combination of off-road performance and on-road dynamics. Its powerful road presence and high levels of on-board technology hallmark it as a premium 4x4 with the perfect blend of go-anywhere capability, comfort and refinement.

Wherever you want to go, Land Cruiser will take you there. And bring you back.

INTERVIEW: SADAYOSHI KOYARI, LAND CRUISER CHIEF ENGINEER



Which were the main areas you wanted to improve with the development of the new Land Cruiser?

The development concept of the new Land Cruiser is “Advanced Robustness”. “Robustness” is part of the Land Cruiser DNA and “Advanced” is what the model needs to be to remain at the top of its segment.

The briefing I gave to my development team, based on customer feedback and our internal re-evaluation of the current model, was based on 3 pillars:

- Create a new design for both the interior and the exterior so that customers can immediately identify the vehicle as the new Land Cruiser
- Strengthen the Land Cruiser’s off-road legend by adopting new technologies that will further enhance its off-road abilities for all customers
- Achieve a higher level of safety and comfort thanks to new equipment

Although still instantly recognisable as a Land Cruiser, the new exterior has a more modern and robust look, thanks to the updated rear and completely redesigned front featuring a new grille and hood.

The interior provides the occupants with a more sophisticated environment, thanks to the new instrument panel, new centre console and the premium quality trim and finishes.

The new Land Cruiser adopts several new specifications to further increase its off-road capabilities, such as the new Torsen Limited Slip Differential, while at the same time providing a high level of on-road driving comfort.

The level of safety has also been increased with the introduction of several new features and the availability of Toyota Safety Sense. And, last but not least, we're introducing several new comfort features such as ventilated front seats and heated rear seats.

In terms of the development process, which was the biggest challenge you and your team were faced with?

Safety is one of the core values of Toyota. Our belief is that we should make the best technology widely available to our customers because it is only when safety systems are in widespread use that they can have a real impact on the elimination of traffic accidents and fatalities.

And making Toyota Safety Sense available on the new Land Cruiser was probably our biggest challenge during the development.

The current generation Land Cruiser was launched in 2009 and its existing electrical platform did not allow us to integrate all the safety features. Therefore my team spent a lot of time and effort in developing a new electrical platform, including new ECUs and a completely new wiring harness.

Thanks to its heritage of more than 65 years and the fact that it's being sold in more than 190 countries worldwide, Land Cruiser has become a truly iconic off-road vehicle. What are -according to you- the main reasons for the car's global success?

In my career at Toyota I've accumulated more than 30 years of experience with off-road vehicles. During this time my philosophy has always been: "meet customer needs without sacrificing reliability, durability or rough road performance".





INTERVIEW: SADAYOSHI KOYARI, LAND CRUISER CHIEF ENGINEER

For sure, Land Cruiser is renowned for its off-road capabilities, but I believe the main reason for its global success is that it combines these with a high level of on-board comfort and good on-road driving performance.

This makes Land Cruiser the perfect vehicle to go anywhere, at any time.

The new Land Cruiser has a lot of features to support the driver while driving off-road. Which is your favourite one and why?

I very much like features such as the Multi-terrain Select System and Multi-Terrain Monitor.

These systems will support the driver going off-road and help him to fully enjoy the experience and explore new terrains, regardless of his off-roading skills.

At times where you think you've reached the limits these support systems will help you and show you the true capabilities of the vehicle.

Even now there are still moments where I'm surprised at what the Land Cruiser can do and the type of extreme off-road conditions it can withstand.

Can you still ensure the durability and reliability of Land Cruiser with the increasing number of equipment features?

Durability and reliability remain the core values of Land Cruiser. We will never make any compromises on this.

The new features that we introduce on the car are there to support the driver, to make off-roading easier and more enjoyable. But they are only there to support the driver, they are not essential for the car to drive.

So even in the case of any defects in the driver support systems the car will still be able to drive and make it home safely.

Toyota is selling a lot of hybrid vehicles, what would be the main challenges to develop a hybrid off-road vehicle?

Of course we are studying the feasibility of an off-road vehicle with a hybrid powertrain but there are still some challenges, especially in the area of reliability and durability. For example, the batteries are still very sensitive to high and low temperatures and vibrations.

From our perspective, it is essential that each Land Cruiser variant can live-up to the model's heritage and thus can cope with the most extreme driving conditions around the world.

Step by step progress is being made to make hybrid systems more though and more reliable in extreme conditions. The experience we gain from our existing hybrid models is essential for this development process.

I feel that once these reliability and durability challenges are addressed we could potentially develop a Land Cruiser Hybrid.

MORE DYNAMIC, MODERN AND ROBUST STYLING

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- A new front design inspired by the model's unique design heritage
 - Maintaining core strengths of Total Practicality, Durability and Capability
 - 'Form follows function' design to ensure the model's off-road capabilities



MORE DYNAMIC, MODERN AND ROBUST STYLING

THE EXTERIOR DESIGN of successive Land Cruiser generations has always combined the stylish aesthetics of a vehicle entirely at home in any environment with the robust image of durability and power expected from a genuine four-wheel drive machine.

The new Land Cruiser builds on this proven, trusted formula with a new design which is visually more agile and dynamic, yet maintains three core strengths essential to the vehicle's renowned go-anywhere credentials:

Total Practicality -with headlamps and cooling openings positioned to maximise both protection and wading depth; Total Durability -with the powertrain and all functional parts well protected; and Total Capability -with the tight turning circle and generous ground clearance essential for even the most demanding off-road driving.

The new Land Cruiser's overall length has increased by 60 mm to 4,840 mm (4,565 mm for the 3-door model). It boasts exceptional manoeuvrability, with a minimum turning circle of just 5.8 metres (5.2 metres for the 3-door model).

With newly designed bonnet, radiator grille, headlamps, front bumper and fenders, the front of the Land Cruiser draws on several structural elements from its unique design heritage.

The bonnet has been shaped to enhance downward visibility at the centre. In order to protect the engine bay, it is sandwiched by the bumper sides. Incorporating integral fog lamps, the lower part of the bumper corners kick upwards and the centre section has been shaped like a skid plate to enhance off-road manoeuvrability. And the fender tops have been raised to help drivers more easily locate the vehicle extremities.

Organised into a powerful, single graphic form, the radiator grille and headlamps have been placed high for greater off-road functionality. The grille openings are as large as possible to allow for optimum engine cooling performance, while the headlamp main beams are positioned inboard to avoid damage from obstacles during off-road driving.

In keeping with Land Cruiser heritage, the grille itself features broad vertical bars with slit-shaped cooling openings finished in chrome. Integrating high and low beams, a front turn signal lamp and Daytime Running Lights (DRL) within a distinctive casing, the headlamp clusters may be equipped with either halogen or LED/halogen headlamps, the latter incorporating LED DRL.

Reinforcing the Land Cruiser's broad, powerful stance, the sharply trimmed lower section minimises the effect of the front overhang on the vehicle's off-road driving approach angle. Allied to a minimum ground clearance of 215 mm (205 mm for 3-door models), 31 degree approach, 25 degree departure and 22 degree ramp breakover angles ensure the model's off-road abilities.

In profile, the front bumper peak has been raised, and the bonnet, fender line, front bumper and rear bumper are now aligned on the same horizontal axis, giving the new Land Cruiser a more athletic and dynamic posture.

The vehicle profile is further enhanced by a choice of six-spoke 17" alloys with new, low RRC (Rolling Resistance Coefficient) tyres, high gloss painted 18" alloys, or a new, 12-spoke, machined finish 19" alloy wheel design.

To the rear, new elements include a redesigned lamp cluster featuring an LED stop light, a smaller rear garnish plate incorporated within the number plate surround, and a restyled bumper with a kicked up base to the protruding corners.

The new Land Cruiser is available in a choice of ten body colours, including two newly available –Midnight Emerald Blue and Avant-Garde Bronze metallic.



HIGHER QUALITY INTERIOR

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- Revised instrument panel with new driver's binnacle, centre console and steering wheel designs
 - Drivetrain-, driving- and comfort-related switchgear organised into function-specific zones and ergonomically optimised
 - More sophisticated, premium quality trim and finishes



HIGHER QUALITY INTERIOR

THE INTERIOR OF THE NEW LAND CRUISER features revised dashboard styling incorporating new designs for the driver's instrument binnacle and centre console. It combines improved operability with the refined finish appropriate to a premium quality all-terrain vehicle.

The drivetrain-, driving- and comfort-related switchgear has been clearly separated into function-specific zones and ergonomically optimised for ease of use under even the most extreme conditions.

The top of the new centre console tower has been lowered for a more sleek appearance and improved front visibility when driving off-road. It incorporates a new, larger 8" full-colour multimedia screen, a flush-surface air-conditioning control panel and (fully described in the off-road driving chapter) a drivetrain-related instrument cluster.

Behind a new leather-clad gear lever reshaped for greater comfort, the driving- and comfort-related switchgear is clearly divided into separate panels for ease of use. The latter now includes heating and ventilation to the front seats.

Finished with a Silver Hairline texture that creates the appearance of sculpted metal, the centre console tower is cushioned between soft pads that support the occupants' knees.

In the redesigned, four-gauge driver's instrument binnacle, the precision Optitron meters feature a metallic base panel and spin polished dials with raised scale markings.

They flank a 4.2" TFT colour Multi-information Display which provides drivers with comprehensive vehicle and infotainment data. Controlled via steering wheel mounted switchgear, the display features on-screen content including driving, vehicle, navigation, audio, driver assistance and warning message information.

The steering wheel itself is also new, now matching that found in Land Cruiser V8 models.

The heightened luxury and sophistication of the new interior design has been further enhanced by new, white illumination for the instru-

ALL SWITCHGEAR HAS
BEEN **ERGONOMICALLY**
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CONDITIONS

ment panel, centre console and door switchgear. And a new interior lighting scheme incorporates LED front footwell and door panel illumination, and roof head lining and glove box lamps for a high quality cabin ambience.

The new Land Cruiser's interior features a choice of three colour schemes -Black, Brown/Black and newly available Premium Beige. A choice of trim finishes completes the premium quality cabin ornamentation –a silver Hairline metallic finish matching the centre console treatment, and newly developed Light Brown or Dark brown wood grain.



TOYOTA TOUCH® 2 WITH GO

The new Land Cruiser is fitted with Toyota Touch® 2 with Go, an 8" full colour touch-screen multimedia and navigation system.

It features AM/FM/DAB radio, a CD/MP3 player, Bluetooth mobile phone connectivity with a music streaming facility, a USB port for the connection of portable music players with the facility to display iPod album cover art, Mirrorlink mobile phone compatibility, an SMS on-screen send/receive function incorporating a 'text-to-speech' function, and swipe operation for ease of use.



HIGHER QUALITY INTERIOR

The system will display emails and calendars depending on Bluetooth mobile phone compatibility. It also features a 'Play More Like This' function which can automatically provide playlist recommendations to suit your mood; a safe and easy way to manage music on the move.

The navigation system comes equipped with 3D city models, landmark graphics, traffic visualisation, and an SOS/emergency call assistance function. A split-screen view allows users to see more functions at a glance, combining the navigation system with media and app information.

Toyota Touch® 2 with Go supports Wi-Fi connectivity allowing users to set up their smartphones as a Wi-Fi hotspot for connection to the system's online functions. Furthermore, the system offers access to the online Toyota customer portal, and several applications including fuel prices, weather and parking space information, and a Twitter App.

Operable in a range of 15 languages, the Advanced Voice Recognition function has been designed for the simplest possible operation whilst driving. It allows the driver to input a full destination, make a phone call, pick a specific song from a connected iPod with a single voice command, to launch and control apps, and to use Apple Siri eyes-free.

Toyota Touch® 2 with Go benefits from the convenience of three years free map care and connected services. These include map updates and free registration to TomTom real-time traffic information, mobile speed camera notification*, fuel price information, parking locations and availability, weather updates, Google Search, Google Street View, Aupeo!, Aha and Twitter.

* where allowed by law





PROVEN POWERTRAIN LINE-UP

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- Choice of 130 kW/177 DIN hp 2.8 D-4D turbodiesel engine or 120 kW/161 DIN hp 2.7 VVT-i and 183 kW/249 DIN hp 4.0 VVT-i petrol engines
 - 6-speed Super Intelligent Electronically Controlled automatic Transmission available on all powertrains
 - Drive Mode Select system with ECO, COMFORT, NORMAL, SPORT S and SPORT S+ driving modes
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PROVEN POWERTRAIN LINE-UP

2.8 D-4D GLOBAL DIESEL ENGINE

Available on 3-door and 5-door models, the 2.8 D-4D Global Diesel Engine comes with a choice of 6-speed manual or 6-speed automatic transmissions.

The 2,755cc, 16 valve, DOHC four-cylinder engine is equipped with a variable nozzle turbocharger with intercooler and develops 130 kW/177 DIN hp at 3,400 rpm. It incorporates a comprehensive range of measures designed to save weight, enhance combustion efficiency and reduce friction.

The engine features an electronically controlled, common-rail type fuel injection system that achieves higher pressure and more advanced injection pressure control. Precise pilot injection matching the state of the ambient air occurs before the main injection to shorten ignition delay, combining stable combustion in even the world's harshest environments with quiet operation and high thermal efficiency.

The unit is equipped with a water-cooled Exhaust Gas Recirculation (EGR) system with an EGR cooler bypass function, and also benefits from a swirl control valve in the intake manifold.

The urea Selective Catalytic Reduction (SCR) system can eliminate up to 99% of NO_x emissions (one of the main causes of air pollution), ensuring that the 2.8 D-4D Land Cruiser complies with Euro 6 regulations.

Mated to the 6-speed Super ECT automatic transmission, the 2.8 D-4D develops an impressive 370 Nm of torque at only 1,200 rpm, and a maximum 450 Nm of torque between 1,600 and 2,400 rpm. It will accelerate from 0-100 km/h in 12.7 seconds, and on to a top speed of 175 km/h. Average fuel consumption and CO₂ emissions are 7.4 l/100 km and 194 g/km respectively.

When mated to the 6-speed manual transmission, the Land Cruiser 2.8 D-4D develops a maximum 420 Nm of torque between 1,400 and 2,600 rpm. It will accelerate from 0-100 km/h in 12.1 seconds, and on to a top speed of 175 km/h while returning an average fuel consumption of 7.4 l/100 km and CO₂ emissions of 194 g/km.

2.7 VVT-I PETROL ENGINE

The proven, 2,694 cc petrol engine generates 120 kW/161 DIN hp at 5,200 rpm, and maximum torque of 246 Nm at 3,900 rpm.

The unit benefits from a range of enhancements designed to save weight, enhance combustion efficiency and reduce friction, resulting in a high power output combined with increased fuel economy.

When mated to a 5-speed manual transmission, the 2.7 litre unit achieves a top speed of 165 km/h and an average fuel consumption of 12.3 l/100 km. When matched to a 6-speed automatic gearbox, maximum speed is 160 km/h and average fuel consumption 12.5 l/100 km.

4.0 DUAL VVT-I PETROL ENGINE

The petrol engine is a lightweight, 3,956 cc, 24 valve, chain-driven DOHC, direct injection V6 with Dual VVT-i. The 4.0 VVT-i is mated to a 6-speed automatic transmission and develops 183 kW / 249 DIN hp* at 5,600 rpm and 381 Nm** of torque at 4,400 rpm. While achieving 0-100 km/h acceleration in 9.7 seconds and a top speed of 175 km/h, it generates CO₂ emissions of 256 g/km, and returns 10.8 l/100 km in the combined cycle.

6-SPEED SUPER INTELLIGENT ELECTRONICALLY CONTROLLED AUTOMATIC TRANSMISSION

All powertrains can be mated to a 6-speed Super intelligent Electronically Controlled automatic Transmission (6 Super ECT) which benefits from several control systems designed to improve both fuel economy and driving performance.

High-speed Gear Effective Utilisation Control determines the availability of high-speed gears in real time according to driving conditions. For instance, taking into account vehicle loading and throttle setting, the system will determine whether 6th gear is available or the vehicle should remain in 5th to achieve the optimum balance of driving power and fuel efficiency.

Deceleration Downshift Control optimises downshifts when decelerating to improve fuel efficiency. The fuel supply is automatically cut



off during periods of engine braking, unless engine speed drops to the low rpm threshold, when fuel injection is resumed to prevent engine stalling. Accordingly, the transmission maximises engine braking by selecting a lower gear to prevent engine speed dropping below the low rpm threshold, thus extending fuel cut off periods to drastically enhance fuel economy.

Artificial Intelligence (AI)-SHIFT Control incorporates Accelerator Immediate Close and Immediate Open Control. The former makes it easier to maintain the current gear when the accelerator pedal is suddenly released, enhancing both engine braking force and responsiveness when accelerating again. The latter performs downshifts immediately on sudden depression of the accelerator pedal, enhancing throttle response.

* 207 kW / 282 DIN hp for models sold in Ukraine ** 387 Nm for models sold in Ukraine

PROVEN POWERTRAIN LINE-UP

DRIVE MODE SELECT SYSTEM

The new Land Cruiser features a Drive Mode Select function that allows the driver to choose between ECO, COMFORT, NORMAL, SPORT S and SPORT S+ driving modes.

Depending on the mode selected, the system automatically integrates control of the engine, transmission, the hydraulic steering's Variable Flow Control (VFC), Adaptive Variable Suspension (AVS) and air conditioning, maximising either the vehicle's environmental efficiency or its dynamic abilities.

In ECO mode, engine output and throttle opening are automatically modulated to optimise fuel efficiency under all driving conditions. The air conditioning system temperature and airflow volume are also cooperatively controlled, lowering the system's heating and cooling capacity to further reduce fuel consumption.

In COMFORT mode, suspension control is modified to adopt a lower damping force range more frequently for a more comfortable ride.

In SPORT S mode, engine output and throttle opening are optimised to enhance power delivery at intermediate throttle angles and the automatic transmission shift timing is modified. Together, these measures offer highly responsive acceleration and a sporting steering feel for a more dynamic and engaging driving experience.

SPORT S+ mode combines the SPORT S mode's enhanced powertrain output with coordinated control of the Adaptive Variable Suspension (AVS) and the hydraulic steering's Variable Flow Control (VFC).

SPORT S+ mode automatically increases the difference between inner and outer shock absorber damping through corners to reduce vehicle roll. Simultaneously, the Variable Flow Control (VFC) decreases steering assist torque. These measures combine to optimise handling stability and offer a more sporting and involving driving experience.

DEPENDING ON
THE MODE SELECTED,
DRIVE MODE SELECT
MAXIMISES EITHER
THE VEHICLE'S
**ENVIRONMENTAL
EFFICIENCY OR
DYNAMIC ABILITIES**



UNRIVALED ON- AND OFF-ROAD

DRIVING PERFORMANCE

-
- Segment-unique body-on-frame construction
 - Choice of three rear differential variants -open, locking, or new Torsen Limited Slip Differential (LSD)
 - Improved Multi-terrain Select System (MTS) with AUTO Mode -automatically activated with 5-speed Crawl Control function
 - Expanded Multi-terrain Monitor Functions - with Underfloor View, Front View Rotation function, Panoramic View and Wide Rear View Display
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UNRIVALED ON- AND OFF-ROAD DRIVING PERFORMANCE

UNIQUE BODY-ON-FRAME CONSTRUCTION

Now unique to the segment, the Land Cruiser's body-on-frame construction offers numerous advantages over rival, unibody-equipped vehicles when driving off-road.

Easy to maintain and repair, its combination of very high strength and proven durability not only offers a high level of damage protection, but also significantly reduced body twist, allowing the driver to optimise both vehicle positioning and control.

In addition, the body-on-frame construction efficiently isolates the cabin from suspension impacts, making even the most challenging off-road conditions more comfortable for vehicle occupants.

SUSPENSION

The new Land Cruiser benefits from a front independent double wishbone and rear four-link with lateral rod suspension. The shock absorber oil seal construction and damping force have been optimised to help ensure reliability whilst improving handling stability and ride comfort.

The Land Cruiser may also be equipped with an electronically modulated Kinetic Dynamic Suspension System (KDSS), which optimises the effect of the front and rear stabilisers for enhanced performance both on- and off-road.

High grade Land Cruiser versions further benefit from an Adaptive Variable Suspension (AVS) system which allows the driver to fine tune the vehicle's ride characteristics with a choice of 'Normal', 'Comfort' and 'Sport' settings.

Operating in conjunction with AVS, an electronically modulated rear air suspension features five control modes –including an Auto Leveling function and a switchable Height Control function– to maintain optimum control of the four-link with lateral rod suspension regardless of occupant numbers or payload.

OFF-ROAD PERFORMANCE

Off-road, KDSS virtually disconnects both front and rear stabiliser bars, further enhancing the Land Cruiser's outstanding wheel articulation to ensure ground contact for all tyres over even the most severe terrain. And both AVS and the electronically modulated rear air suspension systems feature bespoke, off-road settings to maximise the vehicle's all-terrain abilities.

The Land Cruiser's proven, permanent four-wheel drive, two-motor transfer technology is available in a choice of three systems.

Each system features an open front axle differential and a central, locking Torsen Limited Slip Differential (LSD). Customers may then choose from three rear differential variants –open, locking, or a second Torsen LSD.

The central, locking Torsen LSD is capable of automatically varying torque distribution between the front and rear wheels from 50:50 to approximately 30:70, in order to provide optimum torque distribution for any given scenario.

The new rear Torsen LSD fulfils two key functions: During deceleration whilst the vehicle is turning, it distributes coast torque generated by engine braking from the inner to the outer rear wheel. This creates

a yaw moment opposite to the direction of the turn, enhancing vehicle stability.

During acceleration whilst turning, the Torsen LSD reduces drive torque to the inner rear wheel if it is slipping, and distributes it to the outer wheel to improve grip and traction.

In combination, these rear Torsen LSD functions offer drivers significantly improved traction on gravel and other slippery surfaces.

Further enhancing the Land Cruiser's permanent four-wheel drive technology, an Active Traction Control system (A-TRC) uses both brake and engine control to distribute torque appropriately to all four wheels.

5-SPEED CRAWL CONTROL

Offering a choice of five speed settings, Crawl Control automatically controls the engine and brakes to maintain a set vehicle speed, helping the driver slowly descent or ascend slopes at a walking pace, or free the vehicle when stuck, without the need to touch the pedals.

DOWNHILL ASSIST CONTROL (DAC) AND HILL-START ASSIST CONTROL (HAC)

Working in forward or reverse, Downhill Assist Control (DAC) helps the driver to regulate vehicle speed on steep, slippery or bumpy downhill gradients. In circumstances when engine braking alone is insufficient to reduce vehicle speed, the system automatically controls brake fluid pressure to maintain a constant, low descent speed with the brake and accelerator pedals untouched by the driver.



UNRIVALED ON- AND OFF-ROAD DRIVING PERFORMANCE

Operating at speeds of less than 25 km/h, with forward speed controlled to between 5 and 7 km/h and reverse speed to between 3 and 5 km/h, DAC allows the driver to descend steep slopes in stability, without the wheels locking, whilst concentrating on steering.

Hill-start Assist Control (HAC) prevents the vehicle from moving backwards during an uphill start when the driver releases the brake pedal. The system temporarily maintains braking to all four wheels for a maximum of two seconds in order to hold the vehicle in place and prevent rollback.

IMPROVED MULTI-TERRAIN SELECT SYSTEM (MTS) WITH AUTO MODE

The new Land Cruiser's off-road abilities have been made even more readily accessible by the addition of an AUTO mode to the Multi-terrain Select (MTS) system.

MTS offers drivers a choice of five terrain modes: Mud and Sand, Loose Rock, Mogul, Rock, and Dirt and Rock. Each mode tailors the vehicle's Active Traction Control (A-TRAC), throttle, braking and traction control systems to suit the specific off-road conditions, providing the driver with optimum traction and vehicle control for the given scenario.

The Multi-terrain Select system can be activated even when the 5-speed Crawl Control function is in use, in which case the AUTO mode is automatically selected and A-TRAC control optimised in accordance with the preset vehicle speed.

OFF-ROAD DRIVER SUPPORT

Easy control of these diverse systems and monitoring of the vehicle's off-road performance is ensured by the centre console control panel and the multi-information screen.

Central to the panel, two switchable dials offer control of both the Multi-terrain Select system and Crawl Control speed adjustment. The panel further incorporates height control, 2nd start, and centre and rear differential locking switches, offering drivers complete control of all the Land Cruiser's off-road systems via one intuitive, simple-to-operate panel.

Located between the Optitron meters in the driver's instrument binnacle, the 4.2" colour TFT multi-information display operates in conjunction with the steering wheel-mounted multi-information switch to provide the driver with a comprehensive range of vehicle information. This includes MTS mode and prompting, vehicle suspension height and off-road system operation in real time.

Enhanced off-road driving assistance is provided by an angle gauge, traction control operation at each wheel and differential lock operation screens. Information regarding individual wheel traction control, steering angle and differential lock operation can be displayed simultaneously, enhancing driver assistance during challenging off-road conditions.

EXPANDED MULTI-TERRAIN MONITOR FUNCTIONS

When MTS begins operation, a Multi-terrain Monitor will automatically display the view ahead of the vehicle on the 8" centre console display screen. Using uprated front, side and rear cameras, the system fea-



tures a versatile display mode capable of showing either independent or combined, front, side and rear views.

The range of Multi-terrain Monitor functions has been expanded in the new Land Cruiser with the addition of an Underfloor View, a Front View Rotation function, a Panoramic View, and a Wide Rear View Display, offering customers even greater assistance during both on- and off-road driving.

Underfloor View mode displays the image taken by the front camera when the vehicle was approximately 3 metres behind its current position, and adds lines showing the current vehicle location and front tyre positions, thus showing drivers the terrain immediately beneath the front of the vehicle.

The Front View Rotation function rotates the front view in accordance with the vehicle tilt angle to keep the horizon horizontal on the display, making it easier for the driver to readily grasp the angle of tilt.

Panoramic View combines with Wide Front View mode to simultaneously display overhead and front camera images, creating a 360 degree view allowing the driver to monitor hard-to-see areas in front and on both sides of the vehicle at blind intersections. The attendant guide line display is switchable between distance reference line and predicted path display modes.

The Wide Rear View Display gives drivers an almost 180 degree wide view from the rear camera.

EXPANDED RANGE OF SAFETY FEATURES

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- Toyota Safety Sense including Pre-Collision System (PCS) with pedestrian detection, Adaptive Cruise Control (ACC), Lane Departure Alert (LDA), Automatic High Beam (AHB) and Road Sign Assist (RSA)
 - Blind Spot Monitor (BSM) with Rear Cross Traffic Alert (RCTA)
 - Upgraded Tyre Pressure Warning System (TPWS) with auto location



EXPANDED RANGE OF SAFETY FEATURES

HIGH GRADE LAND CRUISER models with automatic transmission come equipped with 'Toyota Safety Sense', a set of active safety technologies designed to help prevent or mitigate collisions across a wide range of traffic situations.

Further driver support and safety enhancing systems include a Blind Spot Monitor (BSM) with Rear Cross Traffic Alert (RCTA) and an upgraded Tyre Pressure Warning System (TPWS).

TOYOTA SAFETY SENSE

Combining a camera and millimetre-wave radar for a high level of detection performance, the Land Cruiser's Toyota Safety Sense system features a Pre-Collision System (PCS) with a Pedestrian Detection function, Adaptive Cruise Control (ACC), Lane Departure Alert (LDA), Automatic High Beam (AHB) and Road Sign Assist (RSA) technology.

At speed ranges of between 10 km/h and the vehicle's top speed Pre-Collision System detects objects ahead of the vehicle and reduces the risk of hitting the car in front. When there is a possibility of a collision it prompts the driver to brake with an audible and visual alert. PCS also primes the brake system to deliver extra stopping force when the driver presses the brake pedal. If the driver fails to react in time, the system automatically applies the brakes, reducing speed by approximately 40 km/h or even bringing the car to a complete stop, in order to prevent the collision or mitigate the force of impact.

The system is also able to detect potential collisions with pedestrians, in the event of which automated braking operates at relative speeds of between 10 to 80 km/h, and can reduce speed by approximately 30 km/h.

Adaptive Cruise Control helps the driver to keep a safe distance from the car in front. It detects preceding vehicles and determines their speed. ACC then adjusts vehicle speed (within a set range) to ensure that there is a safe distance between both cars. By using the forward-facing camera and millimetre-wave radar in combination to monitor vehicles merging into or out of the lane ahead, ACC helps maintain smooth acceleration and deceleration while driving.

The Lane Departure Alert system monitors lane markings and helps prevent accidents and head-on collisions caused by leaving lanes. If the vehicle starts to deviate from the lane without the indicators having been engaged, LDA warns the driver with an audible and visual alert.

Automatic High Beam helps ensure excellent forward visibility during night-time driving. It detects both the headlights of oncoming vehicles and the tail lights of preceding vehicles, automatically switching between high and low beams to avoid dazzling other drivers. By using high beams more frequently the system enables earlier detection of pedestrians and obstacles.

Road Sign Assist helps to ensure drivers are kept informed, even if they have driven past a road sign without noticing. It recognises sig-

nage such as speed limits and 'no overtaking' warnings, and displays the information on the TFT multi-information screen in the instrument binnacle. If the driver exceeds the speed limit, the system will activate a warning light and buzzer.

Thanks to the reduced risk of being involved in traffic accidents, vehicles equipped with Toyota Safety Sense can benefit from lower insurance costs or a more advantageous insurance reclassification.

BLIND SPOT MONITOR (BSM) WITH REAR CROSS TRAFFIC ALERT (RCTA)

The BSM system uses a rear-facing millimetre-wave radar to detect both vehicles in the Land Cruiser's blind spots and those approaching rapidly from behind in adjacent lanes. It notifies the driver of either situation by illuminating the BSM icon on the corresponding door mirror. If the turn signal is in operation at the time, the BSM icon will blink.

The RCTA system employs the BSM radar to alert the driver backing out of a parking space to approaching vehicles which may not be visible in either the rear view monitor or door mirrors. When approaching vehicles are detected, the system flashes the BSM icons on the door mirrors, sounds a warning buzzer and indicates the direction from which the detected vehicle is approaching.

TYRE PRESSURE WARNING SYSTEM (TPWS)

The upgraded TPWS not only allows for the constant monitoring of tyre pressures under all driving conditions, but also notifies the driver of a drop in air pressure in any of the Land Cruiser's five tyres, including the full-sized spare tyre. The new system shows the air pressure for each tyre on the Multi-information Display. When low pressure is detected, the system automatically highlights both the location and air pressure of the affected tyre in amber.

**TOYOTA SAFETY SENSE HELPS PREVENT OR
MITIGATE COLLISIONS ACROSS A WIDE RANGE
OF TRAFFIC SITUATIONS**

SPECIFICATIONS

ENGINE	2.8 D-4D 6MT	2.8 D-4D 6AT	2.7 VVT-I 5MT	2.7 VVT-I 6AT	4.0 DUAL VVT-I 6AT (RUSSIA SPEC)	4.0 DUAL VVT-I 6AT (UKRAINE SPEC)
Engine code	1GD-FTV	1GD-FTV	2TR-FE	2TR-FE	1GR-FE	1GR-FE
Type	4 cyl, in-line	4 cyl, in-line	4 cyl, in-line	4 cyl, in-line	6 cyl, V-type	6 cyl, V-type
Fuel type	Diesel	Diesel	Petrol	Petrol	Petrol	Petrol
Valve mechanism	16-valve DOHC	16-valve DOHC	16-valve	16-valve	24-valve DOHC with Dual VVT-i	24-valve DOHC with Dual VVT-i
Displacement (cm ³)	2,755	2,755	2,694	2,694	3,956	3,956
Bore x stroke (mm)	92.0 x 103.6	92.0 x 103.6	95.0 x 95.0	95.0 x 95.0	94.0 x 95.0	94.0 x 95.0
Compression ratio (:1)	15.6:1	15.6:1	10.2:1	10.2:1	10.4:1	10.4:1
Max. power (DIN hp) kW @ rpm	(177)130 @ 3,400	(177)130 @ 3,400	(161)120 @ 5,200	(161)120 @ 5,200	(249) 183 @ 5,600	(282) 207 @ 5,600
Max. torque (Nm @ rpm)	420 @ 1,400-2,600	450 @ 1,600-2,400	246 @ 3,900	246 @ 3,900	381 @ 4,400	387 @ 4,400

TRANSMISSION	2.8 D-4D 6MT	2.8 D-4D 6AT	2.7 VVT-I 5MT	2.7 VVT-I 6AT	4.0 DUAL VVT-I 6AT (RUSSIA SPEC)	4.0 DUAL VVT-I 6AT (UKRAINE SPEC)
Type	6MT	6AT	5MT	6AT	6A/T	6A/T
Gear ratios						
1st	4.171	3.600	3.830	3.600	3.600	3.600
2nd	2.190	2.090	2.062	2.090	2.090	2.090
3rd	1.488	1.488	1.436	1.488	1.488	1.488
4th	1.193	1.000	1.000	1.000	1.000	1.000
5th	1.000	0.687	0.838	0.687	0.687	0.687
6th	0.799	0.580	---	0.580	0.580	0.580
Reverse	3.607	3.732	4.220	3.732	3.732	3.732
Differential gear ratio (final drive)	3.727	3.909	4.555	4.777	3.909	3.909

BRAKES	2.8 D-4D 6MT	2.8 D-4D 6AT	2.7 VVT-I 5MT	2.7 VVT-I 6AT	4.0 DUAL VVT-I 6AT (RUSSIA SPEC)	4.0 DUAL VVT-I 6AT (UKRAINE SPEC)
Front	Ventilated disc brake	Ventilated disc brake	Ventilated disc brake	Ventilated disc brake	Ventilated disc brake	Ventilated disc brake
Rear	Ventilated disc brake	Ventilated disc brake	Ventilated disc brake	Ventilated disc brake	Ventilated disc brake	Ventilated disc brake
SUSPENSION						
Front	Double wishbone	Double wishbone	Double wishbone	Double wishbone	Double wishbone	Double wishbone
Rear	4 link with lateral rod	4 link with lateral rod	4 link with lateral rod	4 link with lateral rod	4 link with lateral rod	4 link with lateral rod
STEERING						
Steering gear type	Rack & pinion	Rack & pinion	Rack & pinion	Rack & pinion	Rack & pinion	Rack & pinion
Power steering type	Integral type	Integral type	Integral type	Integral type	Integral type	Integral type
MIN. TURNING RADIUS						
Tire (m)	5.8 (5-door), 5.2 (3-door)	5.8 (5-door), 5.2 (3-door)	5.8	5.8	5.8	5.8
Body (m)	5.9 (5-door), 5.2 (3-door)	5.9 (5-door), 5.2 (3-door)	5.9	5.9	5.9	5.9
PERFORMANCE						
Max. speed (km/h)	175	175	165	160	175	175
0-100 km/h (sec)	12.1	12.7	13.8	13.9	9.7	9.2
FUEL CONSUMPTION						
Combined (l/100 km)	7.4	7.4	12.3	12.5	10.8	11.4
Fuel tank capacity (l)	87	87	87	87	87	87
CO ₂ EMISSIONS						
Combined (g/km)	194	194	288	292	256	261

SPECIFICATIONS

EXTERIOR DIMENSIONS	2.8 D-4D 6MT	2.8 D-4D 6AT	2.7 VVT-I 5MT	2.7 VVT-I 6AT	4.0 DUAL VVT-I 6AT (RUSSIA SPEC)	4.0 DUAL VVT-I 6AT (UKRAINE SPEC)
Overall length (mm)	4,840 (5-door) 4,395 (3-door without spare wheel) 4,565 (3-door with spare wheel)	4,840 (5-door) 4,395 (3-door without spare wheel) 4,565 (3-door with spare wheel)	4,840 (5-door)	4,840 (5-door)	4,840 (5-door)	4,840 (5-door)
Overall width (mm)	1,855	1,855	1,855	1,855	1,855	1,855
Overall height (mm)	1,835 (5-door with air susp) 1,845 (5-door without air susp) 1,830 (3-door)	1,835 (5-door with air susp) 1,845 (5-door without air susp) 1,830 (3-door)	1,835 (5-door with air susp) 1,845 (5-door without air susp)	1,835 (5-door with air susp) 1,845 (5-door without air susp)	1,835 (5-door with air susp) 1,845 (5-door without air susp)	1,835 (5-door with air susp) 1,845 (5-door without air susp)
Wheelbase (mm)	2,790 (5-door), 2,450 (3-door)	2,790 (5-door), 2,450 (3-door)	2,790 (5-door)	2,790 (5-door)	2,790 (5-door)	2,790 (5-door)
Tread front (mm)	1,585	1,585	1,585	1,585	1,585	1,585
Tread rear (mm)	1,585	1,585	1,585	1,585	1,585	1,585
Front overhang (mm)	975	975	975	975	975	975
Rear overhang	1,075 (5-door) 970 (3-door without spare wheel) 1,140 (3-door with spare wheel)	1,075 (5-door) 970 (3-door without spare wheel) 1,140 (3-door with spare wheel)	1,075 (5-door)	1,075 (5-door)	1,075 (5-door)	1,075 (5-door)
Min. running ground clearance (mm)	215 (5-door), 205 (3-door)	215 (5-door), 205 (3-door)	215 (5-door)	215 (5-door)	215 (5-door)	215 (5-door)
Angle of approach (degrees)	31	31	31	31	31	31
Angle of departure (degrees)	25 (5-door), 26 (3-door)	25 (5-door), 26 (3-door)	25 (5-door)	25 (5-door)	25 (5-door)	25 (5-door)
INTERIOR DIMENSIONS						
Interior length (mm)	1,825 (5-door) 2,525 (5-door with 3rd row seat)	1,825 (5-door) 2,525 (5-door with 3rd row seat)	1,825 (5-door) 2,525 (5-door with 3rd row seat)	1,825 (5-door) 2,525 (5-door with 3rd row seat)	1,825 (5-door) 2,525 (5-door with 3rd row seat)	1,825 (5-door) 2,525 (5-door with 3rd row seat)
Interior width (mm)	1,550 (5-door) 1,565 (5-door with 3rd row seat)	1,550 (5-door) 1,565 (5-door with 3rd row seat)	1,550 (5-door) 1,565 (5-door with 3rd row seat)	1,550 (5-door) 1,565 (5-door with 3rd row seat)	1,550 (5-door) 1,565 (5-door with 3rd row seat)	1,550 (5-door) 1,565 (5-door with 3rd row seat)
Interior height (mm)	1,240 (5-door) 1,175 (5-door with moon roof)	1,240 (5-door) 1,175 (5-door with moon roof)	1,240 (5-door) 1,175 (5-door with moon roof)	1,240 (5-door) 1,175 (5-door with moon roof)	1,240 (5-door) 1,175 (5-door with moon roof)	1,240 (5-door) 1,175 (5-door with moon roof)

TIRES & WHEELS	2.8 D-4D 6MT	2.8 D-4D 6AT	2.7 VVT-I 5MT	2.7 VVT-I 6AT	4.0 DUAL VVT-I 6AT (RUSSIA SPEC)	4.0 DUAL VVT-I 6AT (UKRAINE SPEC)
Tires	265/65R17 265/60R18 265/55R19	265/65R17 265/60R18 265/55R19	265/65R17 245/70R17 265/60R18	265/65R17 245/70R17 265/60R18	265/65R17 245/70R17 265/60R18	265/65R17 245/70R17 265/60R18
Wheels	17x7.5J 18x7.5J 19x7.5J	17x7.5J 18x7.5J 19x7.5J	17x7.5J 17x6.5J 18x7.5J	17x7.5J 17x6.5J 18x7.5J	17x7.5J 17x6.5J 18x7.5J	17x7.5J 17x6.5J 18x7.5J
WEIGHT						
Gross weight (kg)	2,930 – 2,990 (5-door) 2,600 (3-door)	2,950 – 2,990 (5-door) 2,600 (3-door)	2,850 (5-door)	2,850 (5-door)	2,900 (5-door)	2,900 (5-door)
TOWING CAPACITY						
Braked (kg)	3,000	3,000	1,500	1,500	3,000	3,000
Unbraked (kg)	750	750	750	750	750	750

IMAGE BANK

NEW TOYOTA LAND CRUISER

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