LAND CRUISER (100 series)

OUTLINE OF NEW FEATURES

The following changes are made for the new Land Cruiser (100 series).

1. Model Line-up

- An A750F automatic transmission has been added to the 2UZ-FE engine model and the 1HD-FTE engine model for Australia and General countries.
- The 1FZ-FE engine has been discontinued and the 2UZ-FE engine has been re-introduced on the model for Australia.
- The 1HD-T engine has been discontinued and the 1HD-FTE engine has been introduced on the model for General countries.

2. Exterior

- The designs of the front bumper and radiator grille have been changed.
- The outer lens color of the turn-signal lights in the rear combination lights has been changed from amber to clear.
- The design of the back door molding has been changed.
- The design of the side stripes, provided as an option on all models, have been changed.
- 275/65R17 tires and newly designed 17 x 8JJ-60 wheels are provided on the GX and VX grade independent front suspension models as standard or optional equipment.
- 275/60R18 tires and newly designed 18 x 8JJ-60 wheels are provided on the VX grade model for Europe as optional equipment.
- The following exterior colors have been added:

Added Color No.	Added Color Name
4R3	Gold Mica Metallic
1E9	Dark Gray Mica Metallic
3Q2	Dark Red Mica Metallic

2. Interior

- The design of the center cluster has been changed.
- The design of the combination meter has been changed.
- The steering wheel with steering pad switch is used.
- The designs of the center pillar garnish and roof side portion have been changed.
- The design of the assist grip and coat hook has been changed on the model with the curtain shield airbags.

3. 2UZ-FE Engine

- The ETCS-i (Electronic Control System-intelligent) continues to be used from the previous model. However, on the new model, the accelerator cable has been discontinued and an accelerator position sensor has been provided on the accelerator pedal.
- A no-contact type throttle position sensor has been adopted on all models.
- A TWC (Three-Way Catalytic Converter) is used on the model for Australia to comply with the European STEP-II regulations.
- The composition of the TWC (Three-Way Catalytic Converter) has been changed for the G.C.C. countries model (for Saudi Arabia) to comply with the European STEP-II regulations.
- Cranking hold function has been adopted. Once the ignition switch is turned to the START position, this control continues to operate the starter until the engine starts.

4. 1FZ-FE Engine

A TWC (Three Way Catalytic Converter) construction change or addition has been implemented for G.C.C.countries (for Saudi Arabia, FZJ100L-GNMKNKV for China and Peru and FZJ100L-GNPNKV for China) models to comply with the European STEP-II or STEP-I regulations.

5. 1HZ Engine

The following features have been adopted on the model for Australia and the HZJ105L-GCMNSV model for China to comply with the European STEP-II regulations:

- Emission Control System
- EGR System
- Injection Pump with TCV (Timing Control Valve) and BACS (Boost Altitude Compensation System)

6. 1HD-FTE Engine

- A pipe, which retrieves the engine oil that has accumulated in the intercooler pipe, is provided on the throttle body.
- An intake restrictor control system, which uses the same step motor type intake restrictor valve that is used on the Europe model, has been adopted on the models for Australia and general countries.
- An oxidation catalytic converter has been provided on the model for Australia to comply with the European STEP-II regulations.

7. A750F Automatic Transmission

- A newly developed A750F 5-speed automatic transmission [Super ECT (Electronically Controlled Transmission)] has been adopted on all the 2UZ engine models and on the 1HD-FTE engine models for Australia and general countries.
- The gate type shift lever has been adopted.

8. Transfer

The same HF2A type transfer that was used on the previous model is used on the A750F automatic transmission model.

9. Propeller Shaft

Along with the adoption of the A750F automatic transmission, the construction of the front and rear propeller shafts has been changed as follows:

- All the joints of both the front and rear propeller shafts have been optimized and have been strengthened while maintaining the same shape as the previous model.
- The tube diameter of both the front and rear propeller shafts has been increased to improve their strength.

Propeller Tube Diameter	New (A750F)	Previous (A343F, A442F)
Front	65.0 mm (2.6 in.)	54.0 mm (2.1 in.)
Rear	75.0 mm (3.0 in.)	65.0 mm (2.6 in.)

10. Differential

The differential gear ratio has been optimized for use with the A750F automatic transmission.

Type		Gear Ratio (Front and Rear Diff.)
A750F	2UZ-FE	4.100
	1HD-FTE	3.909

11. Brake Control System (ABS with EBD, Brake Assist, A-TRC, and VSC system)

- The deceleration sensor that is provided for the brake control system (ABS with EBD, Brake Assist, A-TRC, and VSC system) has been integrated in the yaw rate sensor.
- Information on the steering angle, vehicle speed, and the actual turning angle of the wheels can now be exchanged between the skid control ECU and the VGRS ECU, which has been newly added for the VGRS (Variable Gear Ratio Steering).
- By changing the resistance value of the coil of the solenoid valves in the hydraulic brake booster established in A-TRC as shown in the following table, the heat resistance has been improved. As a result, the consecutive operation time of this system has increased.

Solenoid Valve	New Model	Previous Model
SA3, SFRH, SFLH, SRRH, SRLH	Approx. 7.2 Ω	Approx. 5.0 Ω
STR, SA1, SA2	Approx. 4.3 Ω	Approx. 3.7 Ω

12. Steering (for Models with Rack-and-Pinion Type Steering Gear)

- A VGRS (Variable Gear Ratio Steering) system, which variably controls the steering angle in accordance with the vehicle speed, has been adopted as optional equipment on the model for Europe.
- The construction and specifications of the steering gear box and the power steering pump have been changed on the models with the rack-and-pinion type steering gear.
- In the optional memory system of the Europe model, the DTC outputs of the tilt-and-telescopic ECU has been changed so that they can be output even when the ignition switch is turned OFF.

13. Body

- Noise and vibration have been reduced through the adoption of the following features:
- The urethane pad at the bottom of the center pillar has been changed to a foam material.
- A sealing material has been provided on the door frame (on VX grade and GX-R grade for G.C.C. countries).
- The capacity of the silencer that is provided on the fender apron has been increased (1HD-FTE engine model).
- An ISO-FIX bar for securing a child seat has been provided on the No. 1 rear seat of the Europe model.

14. Body Electrical System Control

- The configuration of the BEAN (Body Electronics Area Network) has been changed in accordance with the addition of equipment.
- The instrument ECU is based on the previous model. On the new model, the body ECU provides additional control functions in order to comprehensively control the body electrical system.
- A customized body electronic system is used in order to set the control functions of the ECUs through the use of a hand-held tester.

15. Combination Meter

The design and construction of the combination meter has been changed.

16. Wiper System (Only for Europe Model)

A wiper system with a raindrop sensing function has been adopted on the VX grade Europe model as optional equipment.

17. Air Conditioner

- A rear air conditioner has been provided on the 1HD-FTE engine model for Europe, Australia, and General Countries. The basic construction and operation are the same as the previous model.
- A seal and a baffle plate that prevent the detour of warm air from the engine compartment has been adopted to improve the cooling performance of the 2UZ-FE and 1HD-FTE engine models with a rear air conditioner and the 1FZ-FE engine model for the G.C.C. countries. Accordingly, the electric fan that was provided on the models equipped with a rear air conditioner for Europe, Australia, and General Countries has been discontinued. As a result, a reduction in weight and fan noise has been achieved.

18. Multi Display (Only for Europe Model)

A multi display has been provided on the center cluster panel as an option for Europe model. The display, which consists of a wide 7.0-inch LCD (Liquid Crystal Display) screen with a pressure sensitive touch panel, offers improved ease of use.

19. Multi Information Display

A multi-information display has been adopted on the VX grade models.

20. Power Window System

- The one-touch auto-up operation and jam protection function for all the seats, which is already used on the model for Europe, has been adopted on all VX grade models as standard equipment, and as optional equipment on other grades.
- A correction function has been added to the jam protection function to prevent it from activating unintendedly while the vehicle is driven on rough roads.

21. Door Lock Control System

For improved theft deterrence, a double locking system has been added as standard equipment on the RHD models for Europe and as optional equipment on the LHD models for Europe.

22. Engine Immobiliser System (Only for 2UZ-FE Engine Model)

On the previous model, the engine ECU used to control the system. However, a change is made on new model that a transponder key ECU is newly adopted to control the system.

23. Theft Deterrent System

- A theft deterrent system has been provided on the models for Europe and G.C.C. countries as standard or optional equipment. Its basic construction and operation are the same as the model for general countries. However, unlike other models, the model for Europe uses a self-power siren in place of the security horn.
- The warning specifications of this system are listed below.

Warning Method	Interior Light	Illuminates
	Hazard Light	Flashing
	Vehicle Horn	Sounds a warning at approx. 0.4 second cycles
	Security Horn*1	Sounds a warning at approx. 0.4 second cycles
	Self Power Siren*2	Sounds a warning at the cycle of the self-powered siren itself.
	Door Lock Motor	Locking
Warning Time		30 sec.

*1: except European Model
*2: Only for European Model

24. SRS Airbag System

- The side and curtain shield airbags have been adopted as optional equipment on the model for Europe.
- Roll sensing of curtain shield airbags control has been adopted in order to deploy the curtain shield airbags and the seat belt pretensioners for the driver and front passenger, in the event that the vehicle rolls over. A roll sensing of curtain shield airbags cutoff switch is provided on the driver side of the instrument panel to enable the driver to disable this system.
- A dual-stage SRS airbag system has been adopted for the driver and front passenger airbags on the model for Europe as standard equipment.
- In accordance with the adoption of the dual-stage SRS airbag system, a seat position sensor has been established for the driver seat.
- On the new model, the previous mechanical type front airbag sensor assembly (consisting of movable and stationary contact points) has been changed to an electrical (deceleration sensor) type front airbag sensor assembly.
- Front passenger airbag door is made invisible. This means that without the airbag door, the airbag will be inflated by breaking to open the cleavage line stored in the instrument panel inflating.
- 2UZ-FE engine model has adopted a fuel cut control that stops the fuel pump when the airbag is deployed.

25. Power Seat System (Only for European Model)

Infrared communication has been newly adopted between the seat ECU and the power seat operation switch, which are used in the power seat system that is provided as optional equipment for Europe.

26. Moon Roof

The functions listed below have been changed or added.

Destination		Australia	
Function		New	Previous
Ignition Switch OFF (43 sec after ignition OFF)	Slide	Manual with Jam Protection	Manual
	Tilt	Manual with Jam Protection	Manual
Ignition Switch ON	Slide	Manual	←
	Tilt	Manual	←

Destination		Europe	
Function		New	Previous
Ignition Switch OFF (43 sec after ignition OFF)	Slide	Manual with Jam Protection	Automatic close operation with Jam Protection
	Tilt	Manual	
Ignition Switch ON	Slide	Press switch more than 0.3 sec. ↓ Automatic close operation with Jam Protection	
		Press switch less than 0.3 sec. ↓ Manual	
	Tilt	Manual	

Destination		Others	
Function		New	Previous
Ignition Switch OFF (43 sec after ignition OFF)	Slide and Tilt	Press switch more than 0.3 sec. ↓ Automatic close operation with Jam Protection	Automatic close operation with Jam Protection
		Press switch less than 0.3 sec. ↓ Manual	
Ignition Switch ON	Slide and Tilt	Press switch more than 0.3 sec. ↓ Automatic close operation with Jam Protection	
		Press switch less than 0.3 sec. ↓ Manual	

27. Audio System

- An RSAS (Rear Seat Audio System) has been adopted as optional equipment on the model for Europe.
- A steering wheel with a steering pad switch has been adopted as optional equipment on the VX grade.