

Crash Tests

New Car Safety

TOYOTA LANDCRUISER

2004 on

Dual front airbags



Offset crash test at 64km/h

Overall Evaluation



Overall score

24.9 out of 37

Variant: 100 Series

Eng: 4.7 litre petrol

Kerb weight: 2440 kg

Category: 4WD - LARGE

Vehicles built: 2004

Model History and Safety Features

The tested model of Toyota Landcruiser was introduced in Australia during 2002.

Dual front airbags are standard equipment. ABS brakes and electronic stability control are available on some variants.

The front seat belt buckles are mounted on the seats and the upper anchorages are adjustable. These features improve the fit of the seat belt. Pre-tensioners are fitted to the front seat belts to reduce slack in the event of a crash. A three point seat belt is fitted to the centre rear seat. This provides better protection than a two point seat belt.

OVERALL EVALUATION : 4 Stars

The Toyota Landcruiser scored 8.9 out of 16 in the offset crash test. The passenger compartment held its shape reasonably well. Protection from serious leg injury was poor for the driver. There was a slight risk of serious chest injury for the driver and passenger.

The vehicle was awarded a default score of 16 out of 16 in the side impact crash test.

FRONTAL OFFSET CRASH TEST

Body region scores out of 4 points each: Head/neck 4pts, chest 2.9pts, upper legs 2pts, lower legs zero pts.

The passenger compartment held its shape well, except for the footwell. The road wheel moved rearwards substantially and intruded into the driver's footwell, which ruptured. The brake pedal moved rearwards by 267mm and upwards 145mm relative to the driver's seat. The dash moved 8mm towards the driver. The steering wheel hub moved rearwards 28mm, upwards 40mm and sideways 34mm. The front ("A") pillar moved 36mm rearwards. The width of the driver's door opening shortened by 36mm. All doors remained closed during the crash. After the crash high manual effort was required to open the driver's door.

The airbag cushioned the head of the driver and contact was stable. Steering column components and the ignition switch were potential sources of injury for the driver's knees. The passenger's head was cushioned by the airbag.

SIDE IMPACT CRASH TEST

Default 16 points awarded for side impact test.

The side impact test normally used by ANCAP simulates a small car striking the driver's door of the vehicle under test. It is based on a regulation test but the regulation does not apply to vehicles with a high seating position like the Landcruiser. Such vehicles can be expected to perform well in this particular side impact test so ANCAP has decided to award full score for these vehicles instead of conducting a crash test.

ANCAP chose to conduct a pole test as part of a research program. This is usually an optional test for vehicles with head-

protecting side airbags such as curtains. The tested vehicle did not have these and head protection was poor so it scored zero points out of a maximum of two points for the pole test.

INJURY MEASUREMENTS

Refer to the information sheet "How the test are done"	Offset Crash Test at 64km/h (v4.1)		Side Impact Crash Test at 50km/h (v4.1)
	Driver	Passn	Driver
Head HIC	329	340	Not tested (default score)
Acceleration (g for 3ms)	45.8	51.2	
Neck - Shear (kN)	0.31	0.32	
Tension (kN)	1.27	1.05	
Extension (Nm)	16.7	18.5	
Chest Accln (g for 3ms)	35.4	31.3	
Compression (mm)	29.7	28.1	
Viscous criterion (m/s)	0.14	0.11	
Abdomen - Force (kN)	-	-	
Pelvis - Force (kN)	-	-	
Upper legs Force Left (kN)	0.17	1.43	
Right (kN)	1.06	1.59	
Knee displ (mm) Left	0.39	3.55	
Right	0.02	1	
Lower legs Force Left (kN)	1.25	2.13	
Right (kN)	4.61	3.83	
Index (Upper/Low) Left	0.43/0.25	0.31/0.47	
Right	0.56/1.68	0.69/0.91	

Bonus points (maximum 5)

Pole Test: Zero points

Seat belt reminders: None

Modifiers - offset test scores

Head	No deduction
Chest	No deduction
Upper leg	Variable & conc. loading 2 pt deduction L Concentrated loading 1pt deduction R
Lower leg	Pedal upward movement 1pt deduction Footwell rupture 1pt deduction
Foot score	Score zero points

Modifiers - side impact test scores

Not tested

Pedestrian rating (v4.1)



7.98 points out of 36.

Child head impacts zero pts; adult head impacts 7.97pts; upper leg zero pts and lower leg impacts zero pts.



September 2005

Published by
New Car Assessment Program
PO Box 1555
Canberra ACT Australia 2601

LCRUISE05.doc issued 2-Sep-05