

# Crash Test Results

## New Car Safety

### TOYOTA RUKUS

From 2010 Front+side+head airbags



Offset crash test at 64km/h



**ANCAP** Occupant Protection  
Rated ★★★★★

**Occupant Protection Score 32.61 out of 37**

Variant: Build 1

Eng: 2.4

Kerb mass: 1420 kg

Category: CAR - MEDIUM

Vehicles built: 2010

#### Model History and Safety Features

The tested model of Toyota Rukus was introduced in Australia during 2010. This ANCAP 5 star rating applies to all Rukus variants and it replaces the previous rating, following a successful pole test conducted by ANCAP.

Dual front airbags, side airbags and head-protecting side curtains are standard equipment. Antilock brakes (ABS), electronic brake distribution (EBD) and electronic stability control (ESC) are also standard. Advanced seat belt reminders are fitted to both front seats.

Pretensioners 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 (lap) seat belt.

#### OCCUPANT PROTECTION: 5 Stars

The Rukus scored 12.61 out of 16 in the offset crash test. The passenger compartment held its shape well. Protection from serious leg injury was marginal for the driver.

The vehicle scored 16 out of 16 in the side impact crash test and a further two points in the optional pole test.

#### FRONTAL OFFSET CRASH TEST

Body region scores out of 4 points each: Head/neck 3 pts, chest 3.88 pts, upper legs 2.58 pts, lower legs 3.16 pts.

The passenger compartment held its shape well in the offset crash test. The accelerator pedal moved rearwards by 60 mm and upwards 16 mm. The steering wheel hub moved 25mm forward, 46mm downward and 6 mm sideways. The front ("A") pillar moved 21 mm rearwards. All doors remained closed during the crash. After the crash the driver's door could be opened with high manual effort.

The airbag cushioned the head of the driver but the head twisted, increasing the risk of neck injury. Steering column components were a potential source of injury for the driver's right knee. The passenger's head was cushioned by the airbag. The fascia on each side of the glove box was a potential source of knee injury.

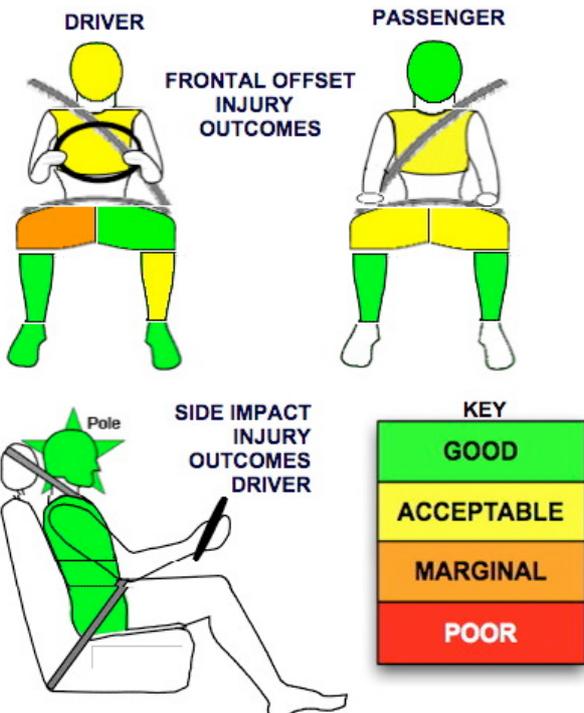
#### SIDE IMPACT CRASH TEST

Body region scores out of 4 points each: Head 4 pts, chest 4 pts, abdomen 4 pts, pelvis 4 pts.

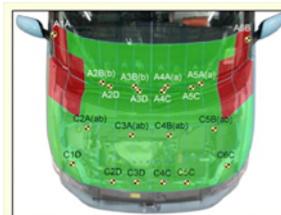
The vehicle was eligible for an optional pole impact test, since it had head-protecting side airbags. The manufacturer decided to go ahead with the pole test and the vehicle earned the maximum two points.

#### PEDESTRIAN PROTECTION: Acceptable

Good protection for all child and for the majority of adult areas tested. The bumper and leading edge of bonnet provided poor protection for the pedestrian's leg. Points have been awarded for areas of the windscreen clear of structure.



PEDESTRIAN PROTECTION	Child head impacts	12
<b>ACCEPTABLE</b> v5.2	Adult head impacts	8.5
	Upper leg impacts	Zero
	Lower leg impacts	Zero
	Total (out of 36)	20.5



Child and adult head impact



Adult leg impact (upper and full legforms)

pass marginal fail

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rukus11.doc

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**ANCAP**

Crash testing for safety

AUSTRALASIAN  
NEW CAR ASSESSMENT  
PROGRAM

# TECHNICAL DATA - TOYOTA RUKUS - From 2010

## INJURY MEASUREMENTS

Body region	Offset Crash Test at 64km/h (v4.2)		Side Impact Crash Test at 50km/h (v4.1)
	Driver	Passenger	Driver
<b>Head HIC</b>	172	231	83
Acceleration (g for 3ms)	34.1	36.2	30.5
<b>Neck - Shear (kN)</b>	0.33	0.71	-
Tension (kN)	1.22	1.10	-
Extension (Nm)	16.5	15.6	-
<b>Chest Accln (g for 3ms)</b>	35.900	31.100	-
Compression (mm)	22.87	22.10	15.90
Viscous criterion (m/s)	0.07	0.09	0.06
<b>Abdomen - Force (kN)</b>	-	-	0.484
<b>Pelvis - Force (kN)</b>	-	-	1.540
<b>Upper legs Force (kN)</b>			
Left	0.14	1.42	
Right	4.36	3.51	
Knee displ (mm)			
Left	0.86	0.70	
Right	2.66	2.47	
<b>Lower legs Force (kN)</b>			
Left	1.97	1.98	
Right	1.43	1.53	
Index (Upper/Low)			
Left	0.35 /0.59*	0.29 /0.25	
Right	0.24 /0.26	0.39/0.28	

### Bonus points (maximum 5)

Pole Test: 2

Seat belt reminders: 2 (see table below for details)

### Modifiers - deductions from offset test scores

Head	No deduction
Chest	No deduction
Upper leg Concentrated loading	Driver 1 pt deduction Right
Variable contact	Passn 1pt deduction L & R
Lower leg	No deduction
Foot score	Score 4 points

Notes: Steering column and pedal movements are measured relative to the driver's seat.

\* Lower left tibia index based on moment value. Axial data not available.

### Modifiers - deductions from side impact test scores

Chest	No deduction
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### Safety features

These specifications are subject to change. Please check with manufacturer for the latest specifications.

Driver airbag	S	Antilock (ABS) brakes / Electronic brake distribution / Brake Assist	S/S/S
Passenger front airbag	S	Electronic stability control (ESC, VSC, DSC, ESP, VSA)	S#
Side airbags, front seats - chest protection	S	3 point centre rear seat belt	S
Side airbags, front seats - head protection	S	Whiplash rating (RCAR protocol)	Pending
Side airbags, rear seats - head protection	S	Intelligent seat belt reminder - driver	S
Driver knee airbag	X	Intelligent seat belt reminder - front passenger	S
Seat belt pretensioners (Front/rear outboard)	S/X	Intelligent seat belt reminder - rear seats	X

Key:

S = standard on all variants

O = optional on base variant. May be standard on higher variants

V= not available on base variant but standard or optional on higher variants

X = not available on any variant

# ESC required by ANCAP for 5 star rating from 2008

