

# Crash Tests

## New Car Safety

### Kia Rio

03/2007 on 07/2011 - Frontal+Side+Head

#### Overall Evaluation



#### Overall Score

28.5 out of 37

Variant: 5 dr hatch

Engine: 1.4 litre

Category: Small Car

\* Safety equipment, as tested, not standard on all variants

The left-hand-drive European model was tested by Euro NCAP. Australasian specifications may vary and therefore models sold in Australasia might provide different levels of protection to those described on this page.

#### Model History and Safety Features

The tested model of Kia Rio was introduced in Australia during 2005. Dual front airbags are standard equipment. Side airbags and head-protecting side curtains, as fitted to the tested vehicle, are standard on some variants but are not available on others. Antilock brakes (ABS) with electronic brake distribution (EBD) are also standard on some Australian variants and all New Zealand variants. Electronic stability control (ESC) is not available. An intelligent seat belt reminder is fitted to the driver seat.

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. 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.

#### Overall Evaluation: 4

4 Stars. The Rio scored 11.02 out of 16 in the offset crash test. The passenger compartment held its shape well. Protection from serious chest and leg injury was marginal for the driver. The vehicle scored 14.48 out of 16 in the side impact crash test. There was a slight risk of serious chest and abdomen injury for the driver. A further two points were scored in the optional pole test.

#### Frontal Offset Crash Test

Body region scores out of 4 points each: Head/neck 4 pts, chest 2.04 pts, upper legs 2 pts, lower legs 2.98 pts.

The passenger compartment held its shape well in the offset crash test. The brake pedal moved rearwards by 68 mm. The throttle pedal moved upwards 34 mm. The steering wheel hub moved 4mm rearward, 53mm upward and 1mm sideways. The front ("A") pillar moved 23 mm rearwards. All doors remained closed during the crash.

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

#### Side Impact Crash Test

Body region scores out of 4 points each: Head 4 pts, chest 3.28 pts, abdomen 3.2 pts, pelvis 4 pts.

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

#### Pedestrian rating (v4.1)



Child head impacts	8.63
Adult head impacts	Zero
Upper leg impacts	Zero
Lower leg impacts	4.33
Total (out of 36)	12.96

Offset crash test at 64km/hr



#### Injury Measurements

Refer to the information sheet 'How the tests are done'	Offset Crash Test at 64km/h (v4.1)		Side Impact Crash Test aa 50km/h (v4.1)
	Driver	Passn	Driver
Head			
- HIC	357	309	36
- Acceleration (g for 3ms)	46.5	40.8	20.7
Neck			
- Shear (kN)	0.29	0.65	
- Tension (kN)	1.23	1.2	
- Extension (Nm)	9.5	14.2	
Chest			
- Acceleration (g for 3ms)			
- Compression (mm)	35.71	30.81	25.53
- Viscous Criterion (m/s)	0.01	0.11	0.23
Abdomen			
- Force (kN)			1.3
Pelvis			
- Force (kN)			2.32
Upper Legs Force (kN)			
- Left	2.5	1.82	
- Right	2.54	0.43	
Knee Displacement (kN)			
- Left	1.86	3.94	
- Right	0	0.28	
Lower Legs Force (kN)			
- Left	1.45	2.45	
- Right	3	1.98	
Index (Upper   Lower)			
- Left	0.23   0.18	0.22   0.26	
- Right	0.63   0.37	0.25   0.19	

#### Bonus points (maximum 5)

Pole Test: 2 pts

Seat Belt Reminders: 1

#### Modifiers for offset test scores

Head	No deduction
Chest	No deduction
Upper leg	Variable & Conc. loading for driver & passenger
Lower leg	No deduction
Foot score	3 pts
Structure	

#### Modifiers for side impact test scores

Head	
Chest	Backplate & T12 loads
Upper leg	0.01 pt deduction
Lower leg	
Foot score	
Structure	



Version 1, Published on: 21/11/2007  
Published by  
New Car Assessment Program  
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