

Crash Tests

New Car Safety

KIA RIO

2003 on

Driver airbag

Overall Evaluation



Overall score 16.05 out of 37

Variant: 5 DR HATCH Eng: 1.5 litre.
Kerb weight: 1090 kg Category: SMALL CAR
Vehicles built: 3/04

Model History and Safety Features

The Kia Rio was introduced in 2000. These test results apply to vehicles built from 2003.

A driver's airbag is standard equipment in Australia. Dual airbags are standard in New Zealand but the vehicle tested by ANCAP did not have a passenger airbag.

Pre-tensioners are fitted to the front seat belts to reduce slack in the event of a crash. A two point seat belt is fitted to the centre rear seat. This provides inferior protection compared with a three point seat belt.

OVERALL EVALUATION : 2 Stars

The Kia Rio scored 6.31 out of 16 in the offset crash test. The passenger compartment started to lose structural integrity. Protection from serious leg injury was poor for the driver and chest protection was marginal.

The vehicle scored 9.74 out of 16 in the side impact crash test. Protection from serious chest injury for the driver was close to poor.

The Rio was just short of earning three stars (minimum of 16.5 points required).

FRONTAL OFFSET CRASH TEST

Body region scores out of 4 points each: Head/neck 3.25pts, chest 1.06pts, upper legs 2pts, lower legs zero pts.

The passenger compartment started to lose structural integrity with tears forming at the top and bottom of the door aperture. The front part of the driver's floor was pushed rearwards 277mm. The brake pedal moved rearwards by 293mm and upwards 106mm, relative to the driver's seat. The dash moved 102mm towards the driver. The steering wheel hub moved rearwards 53mm, upwards 45mm and sideways 25mm, relative to the driver's seat. The front ("A") pillar moved 82mm rearwards. The width of the driver's doorway shortened by 72mm. 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. There was a slight risk of serious neck injury. Steering column components were a potential source of injury for the driver's knees. There were no passenger head contacts.

SIDE IMPACT CRASH TEST

Body region scores out of 4 points each: Head 4pts, chest 0.03pts, abdomen 1.71pts, pelvis 4pts.

The vehicle was not eligible for a Pole Impact Test since it did not have head-protecting side airbags. This test can earn eligible vehicles an extra two points.



Offset crash test at 64km/h

INJURY MEASUREMENTS

Refer to the information sheet "How the test are done"	Offset Crash Test at 64km/h (v4.0)		Side Impact Crash Test at 50km/h (v4.0)
	Driver	Passn	Driver
Head HIC	405	486	431
Acceleration (g for 3ms)	46.7	54.4	55
Neck - Shear (kN)	0.56	0.97	-
Tension (kN)	1.99	2.23	-
Extension (Nm)	44.81	14.5	-
Chest Accln (g for 3ms)			-
Compression (mm)	35.6	33.3	41.83
Viscous criterion (m/s)	0.16	0.16	0.64
Abdomen - Force (kN)	-	-	1.86
Pelvis - Force (kN)	-	-	2.75
Upper legs Force (kN)			
Left	2.98	0.59	
Right	0.54	2.23	
Knee displ (mm)			
Left	1.4	0	
Right	1.36	7.83	
Lower legs Force (kN)			
Left	1.88	2.01	
Right	1.6	1.42	
Index (Upper/Low)			
Left	0.46/0.54	0.21/0.23	
Right	0.2/1.55	0.41/0.09	

Bonus points (maximum 5)

Pole Test: Not eligible Seat belt reminders: None

Modifiers for offset test scores

Head	No deduction
Chest Loss of structure	1pt deduction
Upper leg Variable & conc. loading	2 pt deduction L 1pt deduction R
Lower leg Brake pedal upward	1pt deduction
Foot score Brake pedal rearward	Score zero points
Blocked pedal	1pt deduction

Pedestrian rating

Not tested to latest protocol (version 4). The previous pedestrian results for the Rio, published in 2001, are not comparable with other results in this series.



July 2004

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

RI004.doc issued 15-Jul-04