

# Crash Tests

## New Car Safety

### HYUNDAI SANTE FE

2002 on

Dual front airbags

#### Overall Evaluation



#### Overall score

24.75 out of 34

Variant: GL

Eng: 4 cyl 2 litre (Europe).

Kerb weight: 1790kg

Category: Compact 4WD

Vehicles built: 2002 ('Model year' 2003)

**Important note:** The *left hand drive* European model was used for the tests conducted by EuroNCAP. Australian specifications may vary and therefore models sold in Australia might provide different levels of protection than those described on this page.

#### Model History and Safety Features

The Australian model of HYUNDAI SANTE FE was introduced late in 2000.

In practice dual front airbags are now standard, as are ABS brakes. (although front passenger airbags and ABS brakes are listed as optional it is difficult to obtain a new vehicle without these options).

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. These seat belts also have load limiters.

#### OVERALL EVALUATION : 4 Stars

The HYUNDAI SANTE FE scored 8.754 out of 16 in the offset crash test. The integrity of the passenger compartment was questionable. There was a moderate risk of serious chest and leg injury for the driver.

The vehicle scored 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 1.14pts, upper legs 0.01pts, lower legs 3.6pts.

The passenger compartment held its shape reasonably well in the offset crash test but there were signs of structural instability. The brake pedal moved rearwards by 95mm and upwards - 21mm. The steering wheel hub moved rearwards 26mm, downwards 14mm and sideways 36mm. The front (A) pillar moved 49mm rearwards. The dash rail was starting to separate from the front pillar. All doors remained closed during the crash. After the crash tools were required to open the driver's door.

The airbag cushioned the head of the driver and contact was stable. Metal brackets behind the dash and steering column components were potential sources of knee injury for the driver. The passenger's head was cushioned by the airbag. There were potential sources of knee injury for the passenger.

#### SIDE IMPACT CRASH TEST

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

This test simulates a fairly small car striking the driver's door of the vehicle under test. It is based on a regulation test but the



Offset crash test at 64km/h

regulation does not apply to vehicles with a high seat height like the Sante Fe. Such vehicles can be expected to perform relatively well in this particular side impact test.

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, giving a maximum possible overall score of 34 points.

#### INJURY MEASUREMENTS

Refer to the information sheet "How the test are done"	Offset Crash Test at 64km/h		Side Impact Crash Test at 50km/h
	Driver	Passn	Driver
Head HIC	355	207.2	32.6
Acceleration (g for 3ms)	48.3	39.8	29.9
Neck - Shear (kN)	0.3	0.52	-
Tension (kN)	1.99	1.07	-
Extension (Nm)	13	10.51	-
Chest Accln (g for 3ms)	-	-	-
Compression (mm)	35	34.98	2.3
Viscous criterion (m/s)	0.12	0.16	0
Abdomen - Force (kN)	-	-	0.9
Pelvis - Force (kN)	-	-	0.94
Upper legs Force Left (kN)	3.67	6.42	
Right (kN)	2.31	1.23	
Knee displ (mm) Left	3.58	2.94	
Right	0.36	2.06	
Lower legs Force Left (kN)	0.93	1.55	
Right (kN)	2.04	1.81	
Index (Upper/Low) Left	0.29/0.26	0.25/0.18	
Right	0.49/0.32	0.27/0.3	

#### Bonus points

Pole Test: Not eligible

Seat belt reminders: Not eligible

#### Modifiers for offset test scores

Head

No penalty

Chest

Loss of structure

1pt penalty

Upper leg

Variable & Conc. loading

2pt penalty L&R

Lower leg

No penalty

Foot score

Score 4 points

#### Pedestrian rating (2002 protocol)



4 points out of 36 (11%)

Child head impacts 4pts; adult head impacts zero pts; upper leg zero pts and lower leg impacts zero pts.

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PO Box 1555

Canberra ACT Australia 2601

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