

# Crash Tests

## New Car Safety

### Holden Astra

03/2004 on 06/2007 - Frontal+Side+Head

#### Overall Evaluation



#### Overall Score

Variant: CDXi 5 Dr Hatch

33.54 out of 37

Engine: 1.6 Litre

Category: Small Car

Vehicles tested after 1 January 2008 will require Electronic Stability Control in order to achieve a 5 star rating. This vehicle was tested prior to this date and may or may not meet this new requirement.

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 New Astra was introduced in Australia during 2004.

Dual front airbags, side airbags and head-protecting side curtains are standard equipment on the CDXi variant. ABS brakes are also standard. Other New Astra variants do not have side curtains available. Advanced seat belt reminders are fitted to both front seats.

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: 5

The Astra scored 13.67 out of 16 in the offset crash test. There was a slight risk of serious chest and leg injury for the driver and passenger.

The vehicle scored 15.87 out of 16 in the side impact crash test. There was a slight risk of serious chest injury for the driver. A further 2 points were scored in the optional pole test.

#### Frontal Offset Crash Test

Body region scores out of 4 points each: Head/neck 4pts, chest 2.94pts, upper legs 3pts, lower legs 3.73pts.

The passenger compartment held its shape very well in the offset crash test. The brake and clutch pedals broke away by design, to reduce the risk of injury. The accelerator pedal moved rearwards 56mm and upwards 1mm. The steering wheel hub moved forwards 43mm, downwards 2mm and sideways 2mm. The front ("A") pillar moved 2mm rearwards. The width of the driver's doorway shortened by 2mm. All doors remained closed during the crash. After the crash all doors could be opened normally.

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

#### Side Impact Crash Test

Body region scores out of 4 points each: Head 4pts, chest 3.87pts, abdomen 4pts, pelvis 4pts.

A dummy backplate load of 1.19kN resulted in a 0.13pt deduction from the chest score, to account for increased risk of injury to a real person.

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)



2.94 points out of 36.

Child head impacts 0.94pts;

Adult head impacts 2pts;

Upper leg zero pts and lower leg impacts zero pts.

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 at 50km/h (v4.1)
	Driver	Passn	Driver
Head			
- HIC	372	198	62
- Acceleration (g for 3ms)	44.15	34.92	27.97
Neck			
- Shear (kN)	0.33	0.64	
- Tension (kN)	1.3	0.94	
- Extension (Nm)	17.51	20.57	
Chest			
- Acceleration (g for 3ms)			
- Compression (mm)	29.39	24.97	13.84
- Viscous Criterion (m/s)	0.09	0.09	0.11
Abdomen			
- Force (kN)			0.8
Pelvis			
- Force (kN)			1.54
Upper Legs Force (kN)			
- Left	0.25	0.29	
- Right	0.13	0.26	
Knee Displacement (kN)			
- Left	0	1.16	
- Right	0.08	0.44	
Lower Legs Force (kN)			
- Left	1.76	1.66	
- Right	2.32	1.4	
Index (Upper   Lower)			
- Left	0.42   0.19	0.27   0.16	
- Right	0.46   0.21	0.31   0.15	

#### Bonus points (maximum 5)

Pole Test: 2 points

Seat Belt Reminders: Fitted to front seats - 2 points

#### Modifiers for offset test scores

Head	No deduction
Chest	No deduction
Upper leg	Variable Loading Drv & Passn 1 pt deduction L & R
Lower leg	No deduction
Foot score	Score 4 points
Structure	No deduction

#### Modifiers for side impact test scores

Head
Chest
Upper leg
Lower leg
Foot score
Structure



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