

# Crash Test Results

## New Car Safety

### HYUNDAI iMAX

March 2009 on

Dual front airbags



Offset crash test at 64km/h (iLoad van)

#### FRONTAL OFFSET CRASH TEST (v4.1)

Body region scores out of 4 points each: Head/neck 4 pts, chest 1.24 pts, upper legs 1.58 pts, lower legs 3 pts.

The passenger compartment held its shape reasonably well in the offset crash test. A box section that supports the dash separated from the a-pillar and the floor panel also separated from the a-pillar. The accelerator pedal moved rearwards by 96 mm. The clutch pedal moved downwards 8mm. The steering wheel hub moved 28 mm rearward, 14mm downward and 12 mm sideways. The front ("A") pillar moved 4 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 and contact was stable. Steering column and dash components were a potential source of injury for the driver's knees. The passenger's head was cushioned by the airbag. The glove box support structure was a potential source of injury for the passenger's right knee.

#### SIDE IMPACT CRASH TEST (v4.1)

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

The side impact test normally used by ANCAP simulates a small car striking the driver's door of the vehicle under test. It is based on a regulation test but the regulation does not apply to vehicles with a high seat height like the iMax. Experience shows that such vehicles can be expected to perform well in this test so ANCAP has decided to award full score for these vehicles instead of conducting a crash test.

#### PEDESTRIAN PROTECTION: 1 Star

A poor result, with all areas needing attention.

**Occupant Protection Score 25.81 out of 37**

Variant: 3 seat van

Eng: 2.4 Petrol

Kerb weight: 1940 kg

Category: People Mover

Vehicle built: 3/09

Tested by KATRI (Korea)

#### Model History and Safety Features

The Hyundai iMax was introduced in Australia during 2008. This rating applies to vehicles with improved structural design, built from March 2009. The offset crash test of the *van variant* was conducted by the South Korean government test organisation KATRI, under ANCAP supervision. ANCAP was provided with evidence to show that the iMax has comparable front occupant protection to the van. The rating also applies to the diesel variant.

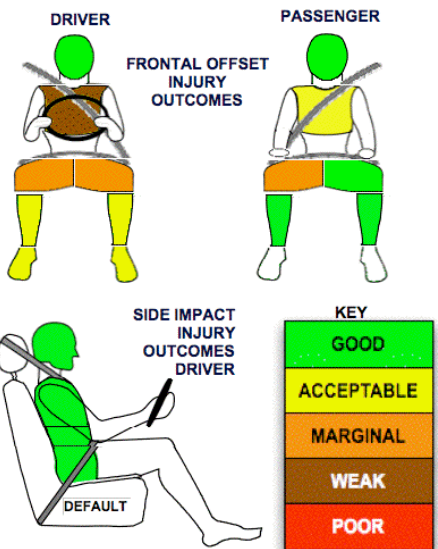
Dual front airbags are standard equipment. Antilock brakes (ABS) with electronic brake distribution (EBD) and electronic stability control (ESC) are also standard.


Pretensioners are fitted to the outboard front seat belts to reduce slack in the event of a crash. 3-point seat belts are fitted to all seating positions.

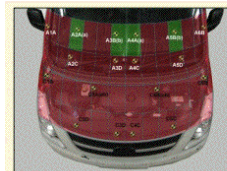
#### OCCUPANT PROTECTION: 4 Stars

The iMax scored 9.81 out of 16 in the offset crash test. The passenger compartment held its shape well, except for the dashboard support structure. Protection from serious chest injury was weak for the driver.

The vehicle was awarded a default score of 16 out of 16 in the side impact crash test.



PEDESTRIAN PROTECTION		Child head impacts	Zero
 Rated ★ ★ ★ ★	Adult head impacts	2	
	Upper leg impacts	Zero	
	Lower leg impacts	Zero	
	Total (out of 36)	2	



Child and adult head impact



Adult leg impact (upper and full legforms)

pass marginal fail

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**ANCAP**

Crash testing for safety

AUSTRALASIAN  
NEW CAR ASSESSMENT  
PROGRAM

# TECHNICAL DATA - HYUNDAI iMAX - Mar 2009 on

## INJURY MEASUREMENTS

Body region	Offset Crash Test at 64km/h (v4.1)		Side Impact Crash Test at 50km/h (v4.1)
	Driver	Passenger	Driver
<b>Head HIC</b>	402	121	Default score awarded
Acceleration (g for 3ms)	51.6	35.5	
<b>Neck - Shear (kN)</b>	-	0.74	
Tension (kN)	-	1.59	
Extension (Nm)	-	39.6	
<b>Chest Accln (g for 3ms)</b>	-	-	
Compression (mm)	34.33	25.55	
Viscous criterion (m/s)	0.28	0.18	
<b>Abdomen - Force (kN)</b>	-	-	
<b>Pelvis - Force (kN)</b>	-	-	
<b>Upper legs Force (kN)</b>			
Left	0.62	0.20	
Right	4.36	1.77	
Knee displ (mm)			
Left	0.83	2.31	
Right	1.75	2.71	
<b>Lower legs Force (kN)</b>			
Left	2.40	1.49	
Right	1.08	1.61	
Index (Upper/Low)			
Left	0.33 /0.57	0.27 /0.20	
Right	0.30 /0.62	0.37/0.32	

### Bonus points (maximum 5)

Pole Test: Not eligible

Seat belt reminders: None

### Modifiers - deductions from offset test scores

Head	No deduction
Chest	Loss of structure 1 pt deduction
Upper leg	Variable & conc. loading Drv 2 pt deduction Left & Right Passn 2 pt deduction Right
Lower leg	No deduction
Foot score	Footwell rupture Score 3 points

### Modifiers - deductions from side impact test scores

Chest Default score awarded

### 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/X
Passenger front airbag	S	Electronic stability control (ESC, VSC, DSC, ESP, VSA)	S
Side airbags, front seats - chest protection	X	3 point centre rear seat belt	All seats
Side airbags, front seats - head protection	-	Active head restraints - front seats	X
Side airbags, rear seats - head protection	-	Intelligent seat belt reminder - driver	X
Driver knee airbag	X	Intelligent seat belt reminder - front passenger	X
Seat belt pretensioners (Front/rear outboard)	S/-	Rear seat belt status indicator	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

