

Crash Test Results

New Car Safety

HOLDEN BARINA 3 door hatch

Mid 2008 on Front+side & head airbags



Offset crash test at 64km/h

FRONTAL OFFSET CRASH TEST (v4.1)

Body region scores out of 4 points each: Head/neck 3 pts, chest 2.34 pts, upper legs 2 pts, lower legs 1.69 pts.

The passenger compartment held its shape reasonably well but there was buckling in the roof, door and sill which indicated it was reaching its limit. The accelerator pedal moved rearwards by 108 mm and upwards 9 mm. The steering wheel hub moved 62 mm rearward, 19mm downward and 14 mm sideways. The steering column mounts broke away by design. The front ("A") pillar moved 88 mm rearwards. All doors remained closed during the crash. After the crash tools were needed to manipulate the lock mechanism of the driver door. The door then opened with high manual effort.

The airbag cushioned the head of the driver but contact was unstable, with the head rolling off the side and striking the door. Steering column components were a potential source of injury for the driver's knees. The passenger's head was cushioned by the airbag.

SIDE IMPACT CRASH TEST (v4.1)

Body region scores out of 4 points each: Head 4 pts, chest 3.64 pts, abdomen 4 pts, pelvis 3.213 pts.

An optional pole test is available for vehicles that are within reach of a 5 star rating and have head-protecting side airbags for extra protection in severe side impacts. The pole test can earn an extra 2 points. Although the Barina has these devices it was not eligible for a pole test as it needed more than 2 points to reach 5 stars.

PEDESTRIAN PROTECTION: Rating pending

ANCAP plans to conduct pedestrian protection tests for this model Barina. A similar model (Chev Aveo) tested by Euro NCAP in 2006 achieved 3 stars for pedestrian protection.



Occupant Protection Score 24.89 out of 37

Variant: 3 Door Hatch

Eng: 1.6

Kerb weight: 1150 kg

Category: SMALL CAR

Vehicles built: 6/08

Model History and Safety Features

The tested model of Holden Barina (Model Year 2009) was introduced in Australia in mid 2008. This 4 star rating only applies to the 3 door hatch which had safety-related improvements for cars built from May 2008. The 5 door hatch and sedan have received similar safety-related improvements as the 3 door hatch but these bodystyles have not been tested by ANCAP.

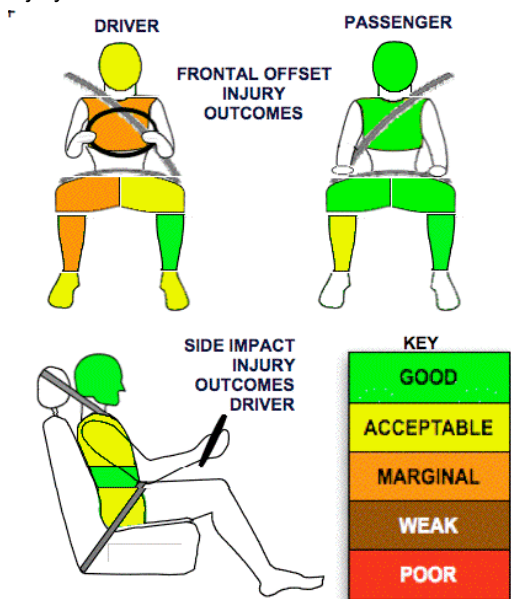
Dual front airbags and side airbags with head-protection are standard equipment. Antilock brakes with Electronic Brakeforce Distribution (EBD) are optional. Electronic stability control (ESC) is not available. An advanced seat belt reminder is fitted to the driver seat.

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.

OCCUPANT PROTECTION: 4 Stars

The Barina scored 9.03 out of 16 in the offset crash test. The passenger compartment held its shape reasonably well. Protection from serious chest and leg injury was marginal for the driver.

The vehicle scored 14.85 out of 16 in the side impact crash test. There was a slight risk of serious chest and pelvis injury for the driver.



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barina08.doc

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TECHNICAL DATA - HOLDEN BARINA 3 door hatch - Mid 2008 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 |
| Head HIC | 451 | 260 | 87 |
| Acceleration (g for 3ms) | 52.2 | 40.3 | 34.3 |
| Neck - Shear (kN) | 0.63 | 0.59 | - |
| Tension (kN) | 1.65 | 1.03 | - |
| Extension (Nm) | 7.4 | 9.1 | - |
| Chest Accln (g for 3ms) | 48.000 | 29.800 | - |
| Compression (mm) | 33.60 | 20.70 | 17.70 |
| Viscous criterion (m/s) | 0.14 | 0.05 | 0.09 |
| Abdomen - Force (kN) | - | - | 0.827 |
| Pelvis - Force (kN) | - | - | 3.590 |
| Upper legs Force (kN) | | | |
| Left | 1.11 | 0.28 | |
| Right | 2.30 | 2.74 | |
| Knee displ (mm) | | | |
| Left | 1.98 | 0.02 | |
| Right | 1.67 | 2.58 | |
| Lower legs Force (kN) | | | |
| Left | 1.65 | 1.92 | |
| Right | 1.09 | 2.33 | |
| Index (Upper/Low) | | | |
| Left | 0.25 /0.15 | 0.32/0.20 | |
| Right | 0.28 /0.92 | 0.26/0.21 | |

Bonus points (maximum 5)

Pole Test: Not tested (has head-protecting side airbags but overall score insufficient for 5 stars)

Seat belt reminders: 1 (see table below for details)

Modifiers - deductions from offset test scores

Head Unstable airbag contact 1 pt deduction
 Chest No deduction
 Upper leg Variable & conc. loading 2 pt deduction Right
 1 pt deduction Left
 Lower leg No deduction
 Foot score pedal movement Score 3.7 points

Note: Steering column and pedal movements are measured relative to the driver's seat.

Modifiers - deductions from side impact test scores

Chest T12 load 0.36 deduction

Safety features

These specifications are subject to change. Please check with manufacturer for the latest specifications.

| | | | |
|---|-----|---|-------|
| Driver airbag | S | Antilock (ABS) brakes / Electronic brakeforce distribution / Brake Assist | O/O/X |
| Passenger front airbag | S | Electronic stability control (ESC, VSC, DSC, ESP, VSA) | X# |
| Side airbags, front seats - chest protection | S | 3 point centre rear seat belt | S |
| Side airbags, front seats - head protection | S | Active head restraints - front seats | X |
| Side airbags, rear seats - head protection | X | Intelligent seat belt reminder - driver | S |
| Driver knee airbag | X | Intelligent seat belt reminder - front passenger | X |
| Seat belt pretensioners (Front/rear outboard) | S/X | 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



ANCAP

Crash testing for safety

AUSTRALASIAN
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