

# Crash Tests

## New Car Safety

### BMW 3-SERIES (LHD)

2000 on

Front+side+head airbags

#### Overall Evaluation



#### Overall score

24.86 out of 37

Variant: SEDAN

Eng: 1.8 litre.

Kerb weight: 1330 kg

Category: LUXURY

Vehicles built: 2001

Test by Euro NCAP

**Important note:** The *left-hand-drive* European model was tested by EuroNCAP. 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 BMW 3-SERIES (LHD) was introduced in Australia in 1998.

Dual front airbags, side airbags (front and rear) and head-protecting inflatable tubes are standard equipment. ABS brakes and electronic stability control are also standard.

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 seat belt.

#### OVERALL EVALUATION : 4 Stars

The BMW 3-Series scored 9.87 out of 16 in the offset crash test. The passenger compartment held its shape well. Protection from serious chest and leg injury was marginal for the driver.

The vehicle scored 12.985 out of 16 in the side impact crash test. There was a high risk of serious chest injury for the driver. A further 2 points were scored in the optional pole test and this earned the vehicle a 4 star rating (minimum 24.5 pts).

#### FRONTAL OFFSET CRASH TEST

*Body region scores out of 4 points each:* Head/neck 4pts, chest 2.63pts, upper legs 2pts, lower legs 1.24pts.

The passenger compartment held its shape well in the offset crash test. The brake pedal moved rearwards by 137mm and upwards 39mm. The steering wheel hub moved rearwards - 24mm and upwards 32mm. The front ("A") pillar moved 36mm rearwards. The width of the driver's doorway shortened by 21mm. All doors remained closed during the crash. After the crash all doors could be opened with normal effort.

The airbag cushioned the head of the driver and contact was stable. Interior 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

*Body region scores out of 4 points each:* Head 4pts, chest 3.01pts, abdomen 1.97pts, pelvis 4pts.

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



Offset crash test at 64km/h

ahead with the pole test and the vehicle earned a further two 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	105	100	59.08
Acceleration (g for 3ms)	22.66	26.77	25.84
Neck - Shear (kN)	0.3	0.6	-
Tension (kN)	0.59	0.4	-
Extension (Nm)	20.2	12.29	-
Chest Accln (g for 3ms)			-
Compression (mm)	31.61	29.28	26.93
Viscous criterion (m/s)	0.13	0.12	0.2
Abdomen - Force (kN)	-	-	1.761
Pelvis - Force (kN)	-	-	2.66
Upper legs Force Left (kN)	0.75	0.21	
Right (kN)	1.82	0.15	
Knee displ (mm) Left	3.69	0.32	
Right	1.76	0.38	
Lower legs Force Left (kN)	1.86	2.26	
Right (kN)	1.74	1.13	
Index (Upper/Low) Left	0.28/1.02	0.33/0.25	
Right	0.37/0.77	0.29/0.14	

#### Bonus points (maximum 5)

Pole Test: 2 points Seat belt reminders: Not eligible

#### Modifiers for offset test scores

Head	No deduction
Chest	No deduction
Upper leg Variable & Conc. loading	2 pt deduction L & R
Lower leg	No deduction
Foot score	Score 4 points

**Pedestrian rating** - tested to previous protocol



November 2003

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

BMW3\_01.doc issued 11-Nov-03