

# Crash Tests

## New Car Safety

### VOLVO S80 (LHD)

2000 on

Driver+side+head airbags

#### Overall Evaluation



#### Overall score

29.23 out of 37

Variant: Sedan

Eng: 5 cyl 2.4 litre.

Kerb weight: 1485 kg

Category: LUXURY

Vehicles built: 2000

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. The tested S80 had no frontal airbag for the passenger but dual airbags are standard in Australia. This is unlikely to affect the overall score.

#### Model History and Safety Features

The tested model of VOLVO S80 was introduced in Australia during 2000.

Dual front airbags, side airbags and head-protecting side curtains are standard equipment in Australia. 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 VOLVO S80 scored 11.23 out of 16 in the offset crash test. The passenger compartment held its shape well. Protection from serious chest and upper leg injury was marginal for the driver.

The vehicle scored 16 out of 16 in the side impact crash test. 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 2.47pts, upper legs 2pts, lower legs 2.76pts.

The passenger compartment held its shape well in the offset crash test. The brake pedal moved rearwards by 95mm and upwards 10mm. The steering wheel hub moved rearwards 78mm and downwards 7mm. The front ("A") pillar moved 33mm rearwards. The width of the driver's doorway shortened by 33mm. All doors remained closed during the crash. After the crash high manual effort was required to open the driver's door.

The airbag cushioned the head of the driver and contact was stable. Steering column components were a potential source of injury for the driver's knees. Chest protection for the passenger, who had no airbag, was marginal.

#### SIDE IMPACT CRASH TEST

*Body region scores out of 4 points each:* Head 4pts, chest 4pts, abdomen 4pts, 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	239.4	270.6	43.9
Acceleration (g for 3ms)	37.2	40.1	21.8
Neck - Shear (kN)	0.55	0.84	-
Tension (kN)	1.28	1.71	-
Extension (Nm)	7.52	7.71	-
Chest Accln (g for 3ms)			-
Compression (mm)	32.68	32.69	16.65
Viscous criterion (m/s)	0.15	0.14	0.07
Abdomen - Force (kN)	-	-	0.65
Pelvis - Force (kN)	-	-	1.15
Upper legs Force (kN)	Left 1.17 Right 2.31	0.51 0.64	
Knee displ (mm)	Left 0.22 Right 0.26	0.73 0.64	
Lower legs Force (kN)	Left 1.21 Right 1.72	0.84 0.98	
Index (Upper/Low)	Left 0.26/0.4 Right 0.68/0.23	0.27/0.21 0.31/0.18	

#### Bonus points (maximum 5)

Pole Test: 2pts

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

S80\_03.doc issued 11-Nov-03